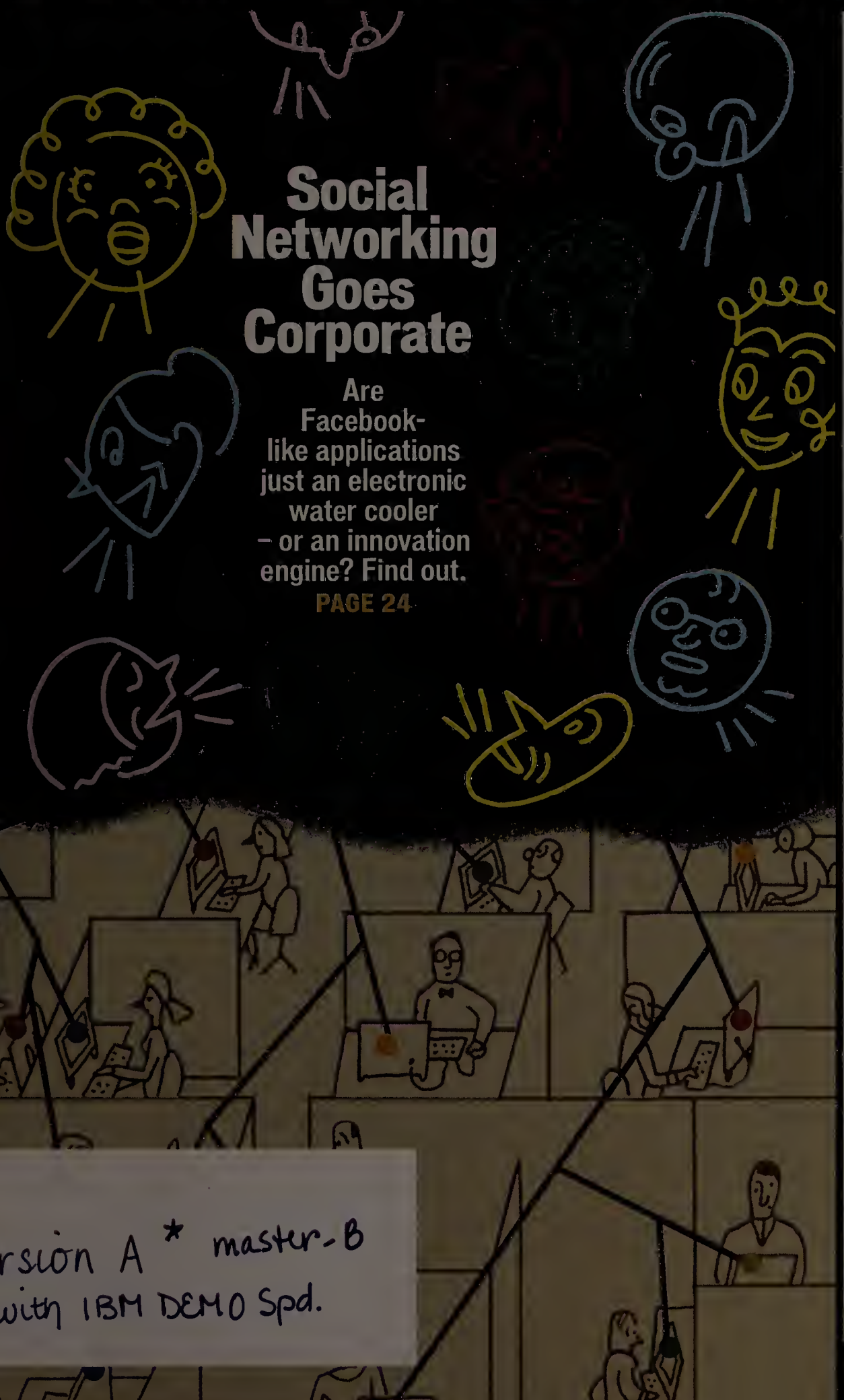
Innovation

**Future Watch:** The talk at IBM, Hewlett-Packard and Microsoft Research is all about 'open innovation.' Is it just a buzz phrase or the future of R&D? PAGE 32

# COMPUTERWORLD®



## Social Networking Goes Corporate

Are Facebook-like applications just an electronic water cooler – or an innovation engine? Find out. PAGE 24



## Inside

AUGUST 11, 2008
VOL. 42, NO. 32 $5/COPY

### News Analysis

**Don't plan on leaving your laptop behind when you travel – not yet, anyway.** PAGE 12

**It seems like a simple question: When should PCs be replaced? But the answer isn't so clear.** PAGE 14

**THE GRILL: L.A. Community Colleges CIO Jorge Mata talks about the politics of education and keeping IT vendors honest.** PAGE 18

### Opinion

**Windows' days may be numbered as Microsoft considers a major OS shift.** PAGE 23

### Careers

**IT training is giving some disabled vets a fresh start.** PAGE 37

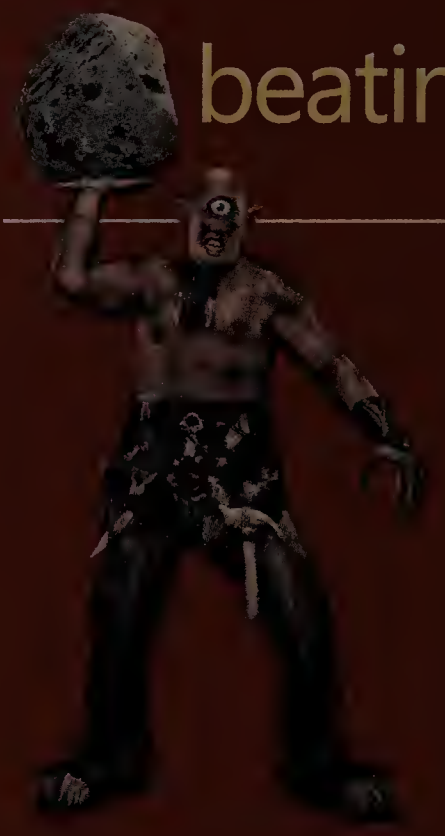
### Don't Miss . . .

**A hospital's award-winning BI system helps it improve treatment, save money – and save lives.** PAGE 28

*Your potential. Our passion.*

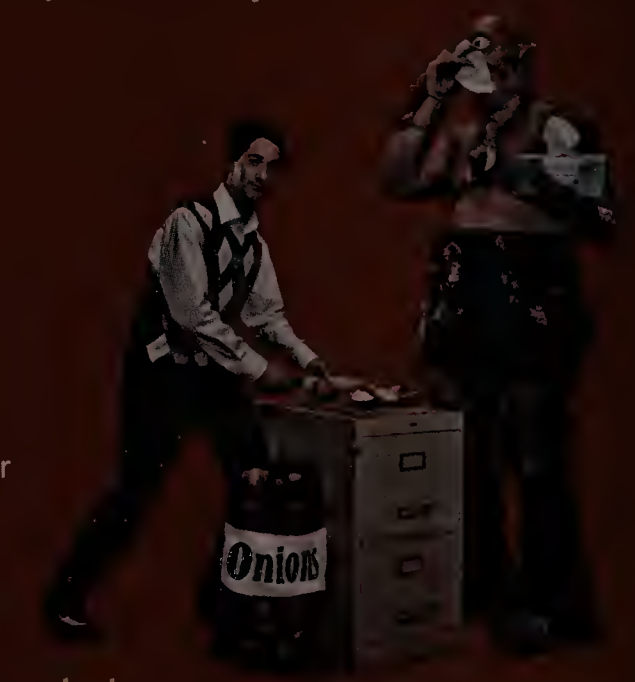
**Microsoft**

# beating back a cyclops. easy.



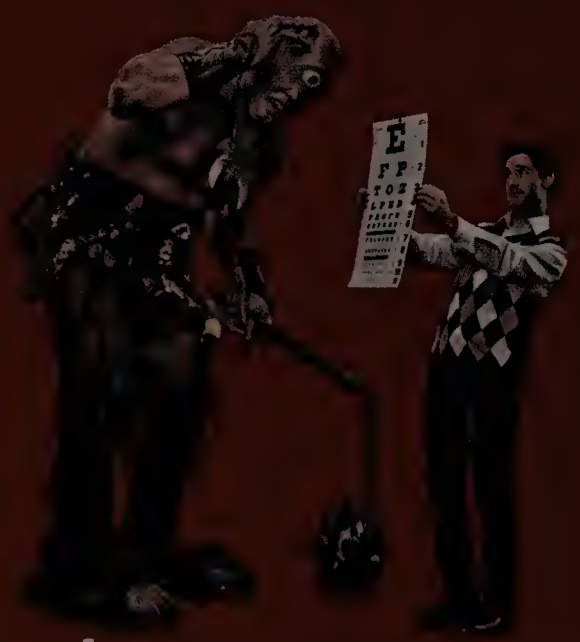
## 1. Fight.

But there's no shame in running. The Cyclops plans to kill you, tear you to pieces, and eat you. Survival is job number one.




## 2. Drive him to tears.

Start chopping onions, and tell him it's for a batch of your award-winning chili. He'll be too bleary-eyed to fight.




## 3. Give him an eye test.

Tell him he'll need a monocle, which you happen to have in the back room, then simply slip out the back.

## 4. Use the classics.

A banana peel, strategically placed, is still hard to beat. Lure the Cyclops to his slippery doom, then run.

## 5. The flashlight gambit.

A bright light shined into his retina may blind him long enough to afford your escape. It might also just make him angrier, so be careful.

## 6. Show a little tenderness.

Maybe the Cyclops is sensitive about his frankly odd looks. Maybe that's why he's so angry. Try a hug.

# beating back security threats. easier.

**1.** Implement Microsoft Forefront.™

Forefront makes defending your systems easier. It's a comprehensive, simple-to-use, integrated family of products that helps provide protection across your client, server, and network edge. For case studies, free trials, demos, and all the latest moves, visit easyeasier.com

Forefront is business security software for client, server, and the network edge.

# Inside

COMPUTERWORLD ■ AUGUST 11, 2008

## ■ NEWS DIGEST

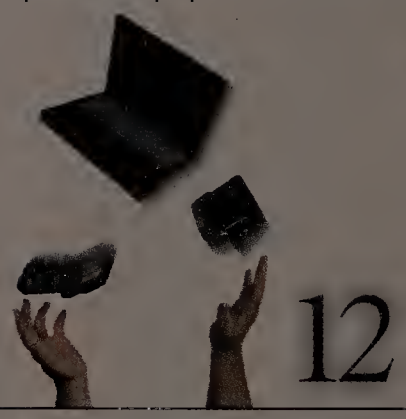
**6** A multinational group of **hackers** allegedly **stole millions** of payment card numbers. | **Microsoft** says it plans to begin rating the potential **exploitability** of security **flaws**.

**8 Exxon Mobil** officials are puzzled by a person who's posting **Twitter** messages in the company's name. | An IT **security oversight** may have opened the door for a data theft at **Countrywide Financial**.

**10 Politicians** of all stripes are embracing **Web 2.0** tools.

## ■ NEWS ANALYSIS

**12 No Laptops Left Behind.** Handhelds may be getting more computerlike, but travelers still have to pack their laptops.



**14 Turning the Page on PCs Not an Easy Call for IT Execs.** How often should PCs be replaced? There's no simple answer.

## ■ OPINION

**4 Editor's Note: Don Tennant** admires free-software-movement founder Richard Stallman because he makes sacrifices for his beliefs.

**23 Steven J. Vaughan-Nichols** thinks that Microsoft could be serious about ditching Windows.

**35 Bart Perkins** offers five ways to create a mission statement.

**40 Frankly Speaking: Frank Hayes** warns IT shops to find unauthorized Wi-Fi access points and secure them – ASAP.

## ■ DEPARTMENTS

**16 On the Mark: Mark Hall** sees the rising cost of travel as a good reason to take a serious look at videoconferencing.

**18 The Grill:** L.A. Community Colleges CIO **Jorge Mata** talks about finessing the politics of education, keeping IT vendors honest and making a difference to students.

**32 Future Watch: The New Face of R&D.** The talk at IBM, Hewlett-Packard and Microsoft Research is all about "open innovation." Is it just another buzz phrase or the R&D strategy of the future?

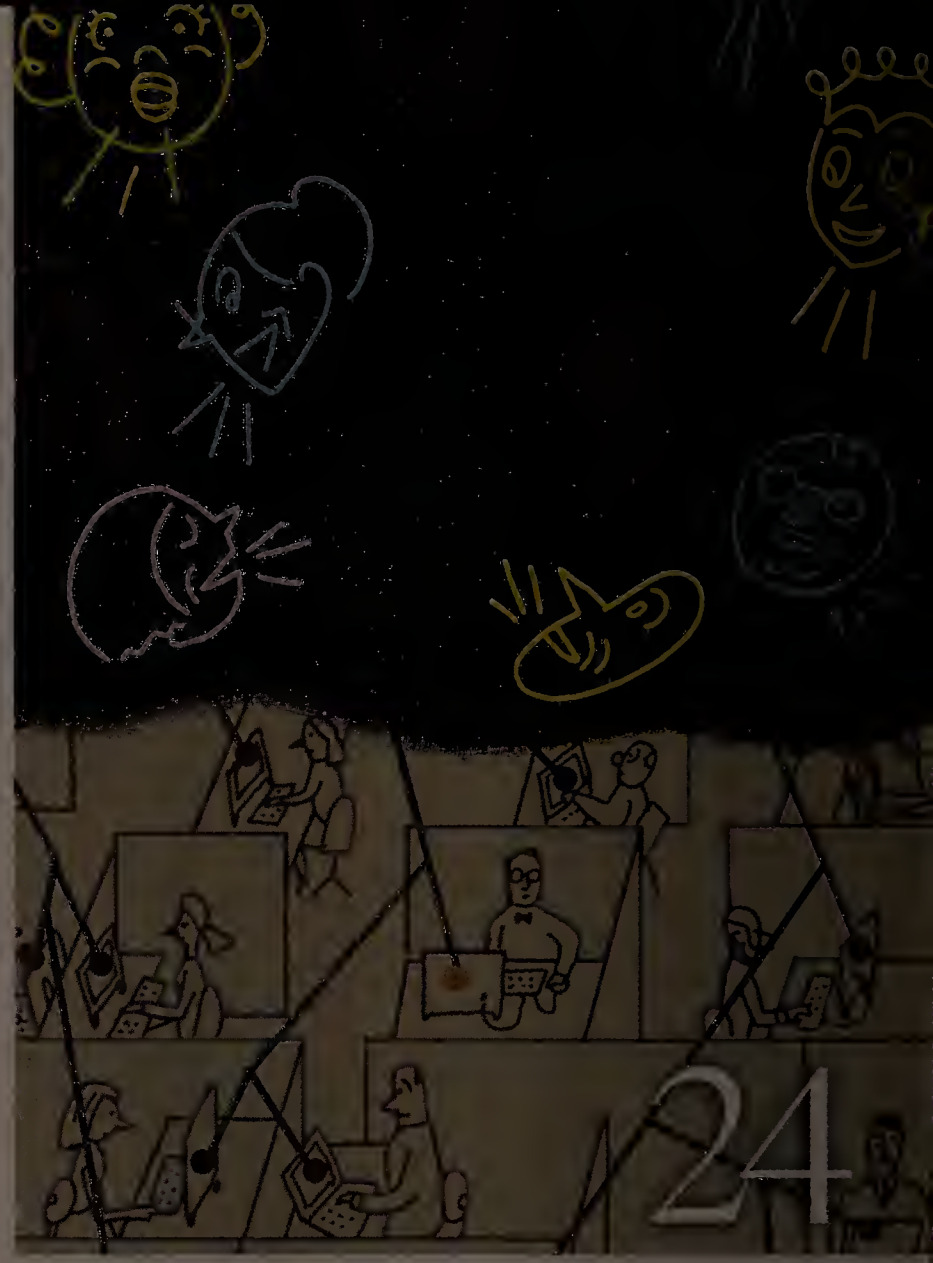
**34 Security Manager's Journal: If I Were in Charge of the World.** C.J. Kelly saw much to admire during her years in state government, but she also thinks there are many ways to make it better.

**37 Career Watch:** IT training gives disabled vets a fresh start.

**39 Shark Tank:** Sometimes you find out that the solution to your problem really is as simple as rebooting.

## ■ ALSO IN THIS ISSUE

| | |
|---|---|
| **Chatter** | 5 |
| **Company Index** | 39 |



## ■ FEATURES

**24 Social Networking Goes Corporate**

**COVER STORY: Facebook-like apps may offer more than an electronic version of the office water cooler. They're integrating the workforce in unexpected ways that just might foster innovation.**

**28 Business Software That Saves Lives**

**A BI tool has helped a Swedish hospital save money and reduce the rate of medical complications among patients by improving predictions about treatments and outcomes.**

COVER: ILLUSTRATION BY MARC ROSENTHAL

# SOMETIMES YOU VISIT A DESK JUST BECAUSE YOU MISS VISITING DESKS.

**INTRODUCING** Intel® Centrino® 2 with vPro™ technology. Greatly reduced maintenance visits.* That's IT as it should be.

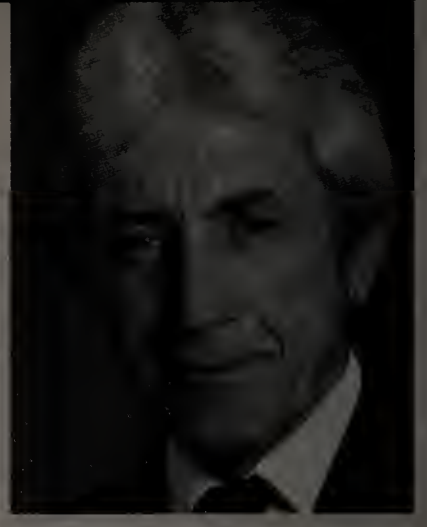
**New Intel® Centrino® 2 with vPro™ technology** operates at the hardware level to let you remotely and wirelessly diagnose, repair and reconnect PCs to the network. Even when the user's notebook is off or the OS is inoperable.**

*Results shown are from the 2007 EDS Case Studies with Intel® Centrino® Pro processor technology, 3rd party audit commissioned by Intel, of various enterprise IT environments and may not be representative of the results that can be expected for smaller businesses. The studies compare test environments of Intel® Centrino® Pro processor technology equipped PCs vs non-Intel® Centrino® Pro processor technology environments. Tested PCs were in multiple OS and power states to mirror a typical working environment. Actual results may vary. Visit intel.com/vpro and eds.com
**Remote manageability requires the computer system to have an Intel® AMT-enabled chipset, network hardware and software, and a connection with a power source and corporate network connection. Setup may require configuration and equipment or integration. Intel AMT may not be available or certain capabilities may be limited depending on system state. Visit intel.com/technology/platform-technology/intel-amt ©2008 Intel Corporation. Intel, the Intel logo, Centrino logo, Centrino, and vPro are trademarks of Intel Corporation in the United States and other countries.

**EDITOR'S NOTE**

Don Tennant

# Standing on Principle



I'M NOT above engaging in a little shameless name-dropping, especially when I know the dropped name will spark a reaction. So while chatting with attendees at the LinuxWorld conference in San Francisco last week, I made no secret of the fact that I had interviewed Richard Stallman a few days earlier. I marveled at the awe and admiration on the faces of many of my listeners.

The irony is that the subject of their veneration is a thorn in the side of the open-source community. Stallman has long disassociated himself from any endeavor that promotes the operating system commonly known as Linux without calling it by what he feels very strongly is its proper name: GNU/Linux.

Stallman started the free software movement in the early '80s when he launched the GNU Project and established the Free Software Foundation, an organization that he still heads. While many in the open-source community revere Stallman for the role he played in giving birth to the concept of freely sharing source code to develop software, the free software (think "free" as in freedom, not as in no cost) and open-source camps have taken divergent philosophical paths. Whereas the open-source community is willing to coexist peacefully with makers of propriety software, Stallman and other free-software purists insist that proprietary software is unethical and unjust and must not be tolerated.

I found out just how adamant Stallman is on the matter when I met with him at MIT. On the table in a small room outside his office was a laptop that could easily be mistaken for a toy. I recognized it as the product of One Laptop Per Child, the Nicholas Negroponte project to provide very-low-cost computers to schoolchildren.

"I decided to switch to one of these last November because it has a free BIOS program, and no other laptop in the world that I knew of was available without a proprietary BIOS program," Stallman said. "It took several months to arrange for us to get a machine, and then for me to switch to it. As I was switching, in April, the head of that project announced his betrayal of our community."

**■ 'It's better not to use computers than to use proprietary software,' Stallman said.**

That "betrayal" was Negroponte's decision to run Windows on OLPC laptops.

"The machine's supposed to lead millions of children to freedom," Stallman said. "But instead I fear it will lead millions of children under the dominion of Microsoft."

When I suggested that adopting Windows was likely to make the OLPC machines more pervasive, Stallman bristled.

"It's completely misguided to try to make something a big success if it's doing a bad thing," he said. "Proprietary software subjugates the user. It's an injustice. And the idea that it's good to get people using computers regardless of everything else is shallow and misguided. It's better not to use computers than to use proprietary software."

Most everyone who would ever read or hear that statement would find it a little over the top, or maybe even over the top and way down the other side. I, for one, have no problem with proprietary software, and I'm comfortable that the remarkable accomplishments and benefits that have been achieved by computers running proprietary software speak for themselves.

Yet I find myself unwilling to write Stallman off as some anachronistic zealot. In fact, I respect him.

He went on to say that he's switching from the OLPC unit to a machine made by Chinese company Jiangsu Lemote Technology that can't run Windows because of the chip it uses. Unfortunately, it doesn't have a suspend-and-resume capability, which Stallman called "somewhat inconvenient." Nor does the battery charge while it's running, which he called "an annoyance."

"But it's worth it to you," I said.

"For freedom," he responded, "I will make a sacrifice."

Not enough of us are willing to truly sacrifice for the principles we believe in. If for no other reason than that, Stallman has earned the admiration he has inspired. ■

**Don Tennant** *is editorial director of* Computerworld *and* InfoWorld. *Contact him at don_tennant@computerworld.com, and visit his blog at* http://blogs.computerworld.com/tennant.

## ■ ONLINE CHATTER

**RESPONSES TO:**

### Reconsidering Vista

*July 28, 2008*

I very much doubt ordinary users have much say about which OS they use at work. Business IT is about applications, not operating systems. Even if users have Vista at home, they know the OS at work is not about bling and glitz, but about stability, reliability, responsiveness and getting tasks done.

Many corporations have decided that Vista is too flaky, incompatible and requires too much professional IT intervention to make it worthwhile upgrading to in the near future. XP will be the business gold standard for years to come. At least that's what we've decided.

We're waiting to see what happens with Win 7. IT can continue to play with Vista, but we're not allowed to let it anywhere near our users. And frankly, as an IT guy, for once I agree with management. Vista has been pretty much a nightmare to roll out because of its incompatibilities. Skipping Vista completely allows us to plan properly for Win 7.

■ **Submitted by:** *Andrew S.*

Certainly Vista is not for everyone. But the conventional wisdom — trumpeted by a cacophony of loud voices online — seems to be that no one should use Vista under *any* circumstances. Ever.

I think that total indictment of the operating system is a bit extreme. I'm afraid I just can't run with the herd this time. Can you?

■ **Submitted by:** *Robert L. Mitchell, author of the column*

I have not been hearing this "conventional wisdom" since SP1 came out, but I don't run in the same circles as the author, so maybe it's still out there somewhere. But Vista does have its place as a *home* OS, assuming your hardware and favorite programs have Vista support.

But when you support clients running SBS2003 and Vista refuses to see their network shares, won't connect their printers properly and has fits with the log-in scripts, then, yes, there is a real problem with Vista in the business environment.

■ **Submitted by:** *Anonymous*

**JOIN THE CHATTER!** *You, too, can comment directly on our stories, at* **computerworld.com**.

## COMPUTERWORLD.COM

**Find these stories at computerworld.com/more**

### Eight Ways to Fight Spam Filter Frustration

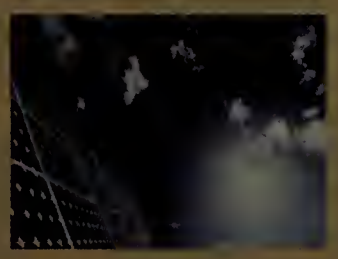
False positives are the scourge of spam filters. Whether you're sending or receiving e-mail, here are some steps you can take to keep good stuff out of the slush pile.

### Make Leopard Leap: Timesaving Tips for OS X 10.5

Are you using the latest version of Mac OS X efficiently? We've got more than 20 ways to get things done faster in Leopard. Try our tips and watch your productivity soar.

### MIT: Solar Power Storage Breakthrough Could Bring Energy 'Nirvana'

New research could make current home power sources obsolete in 10 years.



### Hot Reviews

Search our database of 2007-08 reviews to see how we've weighed in on popular products.

### Do You Tweet?

Follow *Computerworld* on Twitter to hear what's coming, what's breaking, what's hot and what's not.


# COMPUTERWORLD

P.O. Box 9171, 1 Speen Street
Framingham, MA 01701
(508) 879-0700
**Computerworld.com**

■ **EDITORIAL**

**Editorial Director** Don Tennant
**Editor in Chief** Scot Finnie
**Executive Editors** Mitch Betts, Julia King (events)
**Managing Editors** Michele Lee DeFilippo (production), Sharon Machlis (online), Ken Mingis (news)
**Design Director** Stephanie Faucher
**Features Editors** Kathleen Melymuka, Valerie Potter, Ellen Fanning (special reports), Barbara Krasnoff (reviews)
**Senior Editors** Johanna Ambrosio (channels), Mike Barton (new media), Joyce Carpenter (blogs and projects)
**Senior News Editor** Craig Stedman
**News Editors** Mike Bucken, Marian Prokop
**National Correspondents** Gary Anthes, Thomas Hoffman, Julia King, Robert L. Mitchell
**Reporters** Brian Fonseca, Sharon Gaudin, Matt Hamblen, Heather Havenstein, Gregg Keizer, Eric Lai, Linda Rosencrance, Patrick Thibodeau, Jaikumar Vijayan, Todd R. Weiss
**E-mail Newsletters Editor** David Ramel
**Channel Editors** Johanna Ambrosio (servers and data centers), Angela Gunn (security), Lucas Mearian (storage), David Ramel (networking and Internet)
**Assistant Managing Editor** Bob Rawson (production)
**Editor at Large** Mark Hall
**Senior News Columnist** Frank Hayes
**Art Director** April O'Connor
**Associate Art Director** Owen Edwards
**Research Manager** Mari Keefe
**Senior Copy Editors** Eugene Demaître, Monica Sambataro
**Copy Editor** Donna Sussman
**Associate Editor, Community** Ken Gagné
**Office Manager** Linda Gorgone
**Contributing Editors** Jamie Eckle, Preston Gralla, David Haskin, Tracy Mayor

■ **CONTACTS**

Phone numbers, e-mail addresses and reporters' beats are available online at *Computerworld.com* (see Contacts link at the bottom of the home page).

**Letters to the Editor** Send to letters@computerworld.com. Include an address and phone number for immediate verification. Letters will be edited for brevity and clarity.

**24-hour news tip hot line** (508) 620-7716

**Subscriptions and back issues** (888) 559-7327, cw@omeda.com

**Reprints/permissions** The YGS Group, (800) 290-5460, ext. 150, computerworld@theygsgroup.com

# News Digest

FIND THE FULL STORIES AT
**COMPUTERWORLD.COM**

## THE WEEK AHEAD

**MONDAY:** The Siggraph 2008 computer graphics conference starts in Los Angeles; Intel plans to detail the architecture of Larrabee, its upcoming "many-core" processor.

**TUESDAY:** Microsoft is scheduled to release its monthly batch of security fixes – 12 in all, seven of them with "critical" severity ratings (see related story, below).

**FRIDAY:** The U.S. Census Bureau issues its report on retail e-commerce sales during this year's second quarter.

FOTOLIA

CYBERCRIME

## DOJ Fingers Global Ring In Alleged Data Thefts

A MULTINATIONAL ring of hackers that allegedly stole tens of millions of credit and debit card numbers from U.S. retailers used wardriving and sophisticated programming skills to exploit network and system vulnerabilities, according to the federal government.

Then the group encrypted the stolen data, stored it on compromised servers and sold it for millions of dollars through underground Web sites, the Department of Justice claimed in court documents filed last week. The hackers also used the data to withdraw thousands of dollars at a time from ATMs, the DOJ said. It added that they covered their tracks by channeling funds through bank accounts in Eastern Europe and kept in touch with one another via instant messaging and e-mail.

The scheme is a prime example of the highly organized efforts that attackers are now mounting, said Ted Julian, a vice president at Application Security Inc., which sells database monitoring tools.

"The hackers are much more focused, and they'll try 38 doors, they'll try 100 doors," Julian said. "As soon as they find the one that's unlocked, they're on the way to the database."

The group of 11 people allegedly got inside the networks of TJX, OfficeMax and other retailers via unsecured wireless networks that they found during wardriving excursions. They then installed packet-sniffer software and launched SQL injection attacks, according to the court documents.

In a May indictment of some of the same people in connection with data thefts from the Dave & Buster's restaurant chain, prosecutors said researchers at the CERT Coordination Center described the sniffer software as "well-designed," with features "that reflect college-level knowledge of computer programming skills."

And the alleged thieves were tenacious: When they failed to break into a Maryland restaurant's server, they infiltrated the chain's corporate network and installed packet sniffers at 11 restaurants, the DOJ said.

Graham Cluley, a consultant at Sophos PLC, said the compromised retailers needed to tighten their security. But, he added, companies that weren't hit "shouldn't be feeling too smug, because how many of them can say, 'This could never happen inside our organization'?"

*— Patrick Thibodeau, with Grant Gross of the IDG News Service*

SECURITY

## Microsoft to Rate Exploit Potential

**MICROSOFT CORP. will soon edge into the crystal-ball business in its security bulletins by predicting how likely it is that software flaws will be exploited.**

**Starting in October, Microsoft will add an "Exploitability Index" that gives bugs one of three ratings, based on the likelihood that attackers will be able to develop code to take advantage of the flaws (see box).**

**1** Consistent exploit code likely.
**2** Inconsistent exploit code likely.
**3** Functioning exploit code unlikely.

**Microsoft will also give technical info about new vulnerabilities to select security vendors before it issues patches, to give them a head start in crafting exploit-detection signatures.**

**Andrew Cushman, the software vendor's director of security response and outreach, acknowledged that the data-sharing plan "takes some people at Microsoft outside their comfort level." But, he noted, attack code often hits the street just hours after new bugs are disclosed publicly.**

**– GREGG KEIZER**

# UPTIME COMES STANDARD.

intel Xeon inside™

Powerful. Efficient.

## IBM System x3550 Express
## $2,205

OR $56/MONTH FOR 36 MONTHS[1]

IBM System x3550™ Express. It's designed to stay up and running and help reduce system downtime. In fact, it can even identify a potential problem before it becomes one. And if you ever have to replace a component, you can do that without having to shut down. Just one more way the x3550 Express keeps downtime down.

From the people and Business Partners of IBM.

**It's innovation made easy.**

**RUN YOUR CRITICAL APPLICATIONS WITH CONFIDENCE.**

PN: 7978EJU

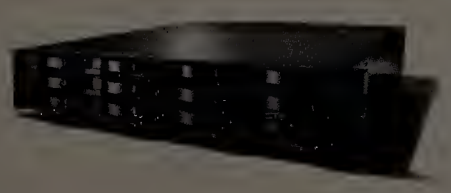
- Featuring up to two Quad-Core Intel® Xeon® Processors E5430 2.66GHz
- Hot-swap redundant cooling for high availability
- Includes IBM Director and PowerExecutive to help manage power consumption, increase uptime, reduce costs and improve productivity
- 3-year on-site limited warranty[2] on parts and labor

---

### IBM SYSTEM STORAGE™ DS3400 EXPRESS KIT

**$13,793**

OR $352/MONTH FOR 36 MONTHS[1]



PN: 1726-42U

- All-in-one kit makes it easier to migrate from your DAS network to SAN
- Includes IBM System Storage DS3400 Dual Controller, four IBM Emulex 42C2069 4Gb/s PCI Express HBAs, Brocade SAN 8 Port Fibre Channel switch (16 total ports), twelve 4Gb/s SFPs, and eight 5-meter optical LC cables
- Emulex EZ Pilot™ installation/management software included

### IBM TIVOLI® CONTINUOUS DATA PROTECTION FOR FILES

**$42 per user**

PN: D613ALL

- Save and recovery technology enables file recovery to any point in time
- Continuous Data Protection (CDP) protects your data from the aftermath of a virus attack or user error
- Up to 3 backup/replication areas help protect against corruption, file loss or system loss

### COMPLIMENTARY SYSTEMS ADVISOR TOOL

Want to find the right server or storage system for you? Our Systems Advisor Tool can help. Just give the tool a little input, and it will identify products that can help meet your business needs. Get started now at **ibm.com**/systems/uptime

IBM express advantage™

**ibm.com/systems/uptime**
**1 866-872-3902** (mention 6N8AH04A)

1. IBM Global Financing offerings are provided through IBM Credit LLC in the United States and other IBM subsidiaries and divisions worldwide to qualified commercial and government customers. Monthly payments provided are for planning purposes only and may vary based on your credit and other factors. Lease offer provided is based on an FMV lease of 36 monthly payments. Other restrictions may apply. Rates and offerings are subject to change, extension or withdrawal without notice. 2. IBM hardware products are manufactured from new parts, or new and serviceable used parts. Regardless, our warranty terms apply. For a copy of applicable product warranties, visit ibm.com/servers/support/machine_warranties or write to: Warranty Information, P.O. Box 12195, RTP, NC 27709, Attn: Dept. JDJA/B203. IBM makes no representation or warranty regarding third-party products or services, including those designated as ServerProven® or ClusterProven®. Telephone support may be subject to additional charges. For on-site labor, IBM will attempt to diagnose and resolve the problem remotely before sending a technician. On-site warranty is available only for selected components. Optional same-day service response is available for select systems] at an additional charge. IBM, the IBM logo, IBM Express Advantage, System x and System Storage are trademarks of International Business Machines Corporation in the United States and/or other countries. For a complete list of IBM Trademarks see ibm.com/legal/copytrade.shtml. Intel, the Intel logo, Xeon and Xeon Inside are trademarks or registered trademarks of Intel Corporation in the U.S. and other countries. All other products may be trademarks or registered trademarks of their respective companies. All prices and savings estimates are based upon IBM's estimated retail selling prices as of 03/24/2008. Prices and actual savings may vary according to configuration. Resellers set their own prices, so reseller prices and actual savings to end users may vary. Products are subject to availability. This document was developed for offerings in the United States. IBM may not offer the products, features, or services discussed in this document in other countries. Prices are subject to change without notice. Starting price may not include a hard drive, operating system or other features. Contact your IBM representative or IBM Business Partner for the most current pricing in your geographic area. © 2008 IBM Corporation. All rights reserved.

INTERNET

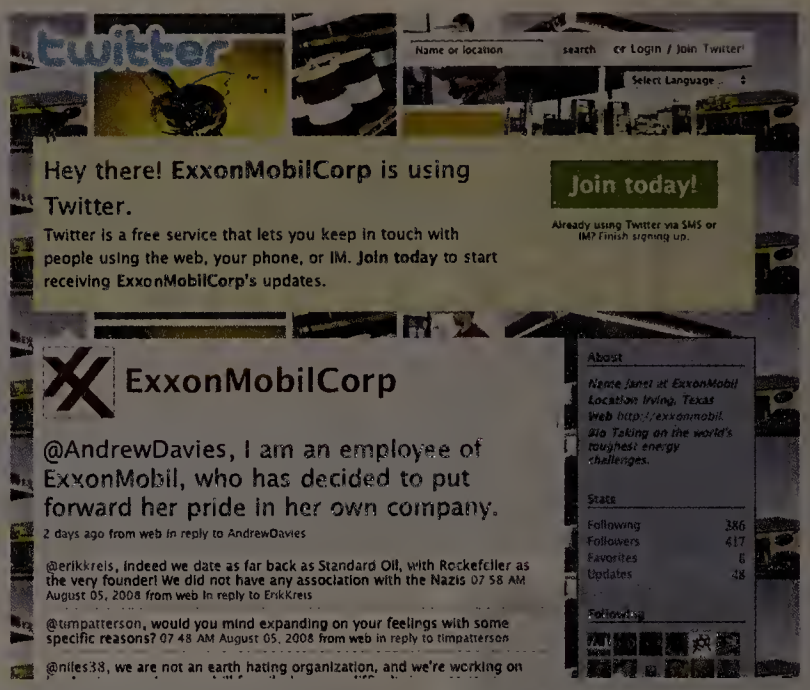
# Exxon Mobil Appears On Twitter, Unwittingly

CLAIMING TO be an Exxon Mobil Corp. employee, a user of the Twitter microblogging site created a page on July 28 with the company's name, part of its logo and photos of an Exxon gas station. As of last week, more than 400 other users had signed up to receive the messages being posted by "Janet at ExxonMobil."

But Exxon Mobil said that it hadn't authorized the activities on Twitter and doesn't know who Janet is or if she or he really does work at the company.

Whoever is posting the messages "is not an authorized person to speak on behalf of the company," said Exxon Mobil spokesman Alan Jeffers. He added that Exxon Mobil hasn't officially started using any social networking sites to communicate with customers.

Jeffers said that after becoming aware of the page




created by Janet, Exxon Mobil contacted officials at Twitter Inc. and asked them to reserve for the company's use any potential account names associated with its various business brands. The Twitter execs agreed to do so, according to Jeffers.

As of Friday, the unauthorized page was still live, and Janet had begun posting new messages, after a two-day absence.

The tenor of the posts seems to be positive toward Exxon Mobil. But some have been political, and others controversial, such as one that seemed to minimize the 1989 *Exxon Valdez* oil spill. Jeffers said the messages also contained "several inaccuracies," from the company's standpoint.

Forrester Research Inc. analyst Jeremiah Owyang said in a blog post that companies need to track Twitter and other Web 2.0 sites to make sure that they don't get "brand-jacked." Businesses "should be monitoring the discussion and [uses] of their keywords in social networks — failure to do so results in becoming case studies," Owyang wrote.

Shel Holtz, principal of Holtz Communication + Technology, a consulting firm that focuses on corporate communications on the Web, agreed in his blog that the Janet case should be a wake-up call for corporate officials. "Far too many organizations shrug off emerging social media channels," he wrote.

*— Heather Havenstein*

# Short Takes

Oracle Corp released an emergency patch to plug a security hole in its WebLogic software, one week after warning users of the flaw. Oracle, which typically issues patches on a quarterly basis, gave the flaw a 10.0 rating – the highest available – under the Common Vulnerability Scoring System.

Facebook Inc said Friday that it had blocked links between its social networking Web site and malware-infested sites that malicious hackers were trying to lure Facebook members to visit. The attackers posted fake messages urging users to click on a link for a video.

Cisco Systems Inc and other firewall vendors are scrambling to fix a problem that can limit the effectiveness of server software patches being issued for a critical flaw in the Domain Name System protocol. Dan Kaminsky, the researcher who discovered the DNS flaw, said he and others had underestimated the number of firewalls deployed in front of DNS servers.

SECURITY

# IT Security Oversight May Have Enabled Data Breach

A FORMER EMPLOYEE accused of stealing customer data from Countrywide Financial Corp. may have been able to download the information to a thumb drive because of an oversight by the home mortgage lender's IT department.

Rene Rebollo, a former financial analyst at Countrywide, was arrested Aug. 1 in Pasadena, Calif., for allegedly stealing and selling the data, which included names, Social Security numbers and contact information.

According to affidavits filed in U.S. District Court in Los Angeles, Rebollo told FBI agents that most of the computers in the office where he worked had a security feature that prevented the use of thumb drives – but he had

found one system that didn't.

He estimated that he downloaded about 20,000 customer profiles weekly over two years, according to the affidavits.

Bank of America Corp., which acquired Countrywide last month, didn't respond to multiple requests for comment about the data thefts and the lender's IT security practices.

Pat Clawson, chairman and CEO of Lumension Security Inc., said companies should scan all network devices to ensure that security controls are in place.

Some organizations have taken far more Draconian steps, he noted, citing federal agencies that filled USB ports with glue to keep them from being used.

– NANCY GOHRING, IDG NEWS SERVICE

office forwards
surging stocks
storm coming
28 "urgent" e-mails
presentation.asap
ninth-inning upset
last-minute e-cards
eleventh-hour assignment
celebrity hospitalization
[illegible] odle
[illegible]

Sprint

What are you missing right now?
Keep the best of the Web with you on the nation's largest mobile broadband network.
Just plug it into your laptop and go.

Free

Sierra Wireless Compass™ 597
Requires eligible upgrade (or new service activation) on a business account, data plan and two-year agreement.

Internet to go. Only on the Now Network.™

sprint.com/mobilebroadband

Largest claim based on total network size (sq. miles). May require up to a $36 activation fee/line, credit approval and deposit. $200 early termination fee/line applies. **Mobile Broadband Card Offer:** Offer ends 12/31/08. While supplies last. Requires activation at the time of purchase. Available for corporate-liable accounts (activations using a business name and tax ID) only. **Upgrade:** Existing customers in good standing with service on the same device for more than 22 consecutive months currently activated on a service plan of $34.99 or higher may be eligible. See in-store rebate form or sprint.com/upgrade for details. Pricing, offer terms, fees and features may vary for existing customers not eligible for upgrade. Mobile broadband card data plan required. See sprint.com/coverage for details. **Other Terms:** Offers not available in all markets/retail locations or for all phones/networks. Sprint Mobile Broadband Network reaches over 248 million people (including data roaming). Not available in all markets/retail locations. Other restrictions apply. See store or sprint.com for details. ©2008 Sprint.

WEB 2.0

# 'Politics 2.0' Heating Up Summer Doldrums in D.C.

JULY AND AUGUST are often quiet months in Washington. This year, though, they've been anything but dull from an IT standpoint, with members of Congress, backers of both presidential candidates and organizers of the upcoming presidential debates all ramping up their use of Web 2.0 tools.

Last week, for example, the Commission on Presidential Debates (CPD) and MySpace Inc. said they're launching a Web portal that will provide live streaming of this year's debates.

And after each one, the MyDebates.org portal will offer bookmarked and tagged videos that can be searched by event, candidate, issues and questions asked, the CPD said. Users will also be able to share, comment on and rate clips.

The debate announcement followed a "Politics 2.0" protest by Republicans in the House of Representatives on Aug. 1. After the House adjourned for vacation, GOP legislators sent messages via Twitter, streamed live video and posted clips on YouTube that protested the lack of a vote on an offshore oil-drilling bill.

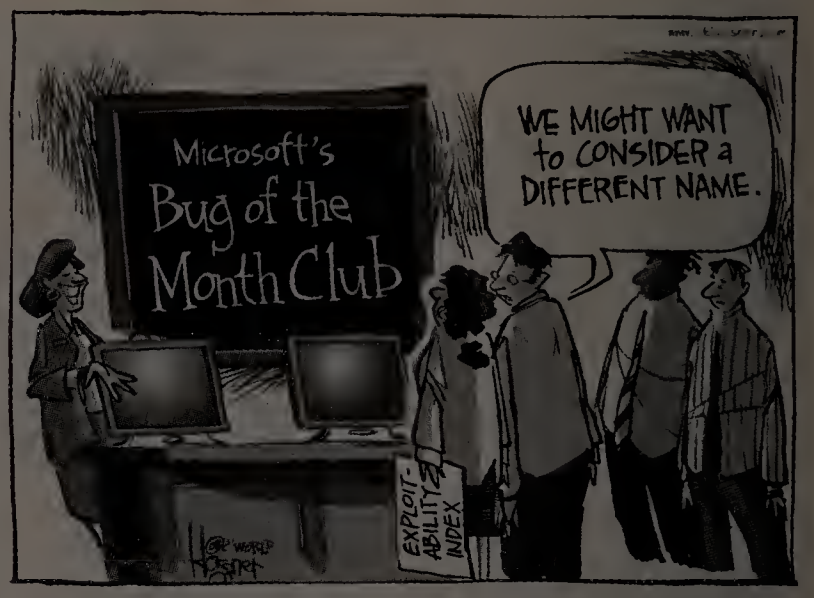
Analysts said the incident shows that like Democratic presidential candidate Barack Obama, GOP politicians now recognize the advantages of using social networking technologies.

In another example, the Republican National Committee on July 29 launched a Facebook parody called BarackBook that tries to discredit Obama by identifying as his "friends" people who may reflect badly on his presidential bid.

Not to be outdone, the Obama campaign recently began posting policy papers on a Web site called Scribd, which has been described as a "YouTube for documents."

*— Heather Havenstein*

BETWEEN THE LINES *By John Klossner*




**Microsoft Corp.** released SQL Server 2008, about three months behind schedule but well within its three-year window for developing the database. The previous release, SQL Server 2005, took five years to complete.

**Delta Air Lines Inc.** said it will start offering in-flight Wi-Fi access this fall and equip all of its 330-plus U.S. planes with the wireless technology by next summer.

**THREE YEARS AGO** Microsoft hired Kevin Turner, a former CIO and business executive at Wal-Mart Stores Inc., to be its chief operating officer.

## Global Dispatches

### Bank Starts Work On IT Overhaul

**MELBOURNE, Australia** – National Australia Bank Ltd. last week said it has begun a five-year initiative to overhaul its core banking systems.

NAB, one of the country's largest banks, is partnering with Oracle Corp. for the project's first phase, which will deliver a new system for the bank's Star Direct unit. The system will be based on the Flexcube banking suite developed by Oracle's i-Flex subsidiary. Initial rollouts are expected within six to eight months. NAB said it will set plans for subsequent phases of the Next Generation Platform project during the same period.

The announcement came just days after NAB disclosed on July 30 that an "overnight processing delay" was holding up paycheck deposits and other payments to customers.

**Andrew Hendry,**
*Computerworld Australia*

### Virtual Mobile Coming to India

**BANGALORE, India** – Mobile virtual network operators that provide cell phone service to customers but don't own spectrum or a network infrastructure may soon be allowed to set up shop in India.

The move to allow MVNOs to begin direct operations is expected to increase competition and lower prices for users, who currently have limited choices for mobile services.

MVNOs would also help make more efficient use of the country's telecommunications infrastructure, the Telecom Regulatory Authority of India said in a government report.

**John Ribeiro,**
*IDG News Service*

**BRIEFLY NOTED**

Nokia Corp. is setting up a six-person research unit that will work to develop prototypes of cell phones suited to the African market. Jussi Impio, team leader of Nokia Research Africa, said the continent is becoming a more important market for Nokia, although he added that the multitude of languages and insufficient infrastructure pose challenges.

**Edris Kisambira,**
*IDG News Service*

**SunGard Availability Services help your business move forward with the most advanced and widest choice of information availability options in the industry**

From virtualization to hot sites to replication and vaulting—SunGard Availability Services does it all. And it's all we do. That kind of focus helps ensure high availability of data, applications and systems and fits your needs and budget precisely.

When we partner with you, you worry less about the road ahead. Here's why: a track record of 100% successful recoveries; over 60 facilities with redundant power connected to SunGard's secure global network; and more than 20,000 end-user positions in facilities across North America and Europe. SunGard Availability Services—the information availability solution for businesses that must run non-stop. **Keep moving, call 1-800-468-7483 or visit www.availability.sungard.com.**

**SUNGARD®** Availability Services | Keeping People and Information *Connected.®*

# No Laptops Left Behind

## Handheld devices may be getting more computerlike, but mobile workers still have to juggle a mix of laptops, PDAs and smart phones.

**By Matt Hamblen**

As handheld devices become more like full-fledged computers, IT managers and end users are again considering the question of whether business travel ers can leave their laptops at home. But that still appears to be more of a future goal than a current reality.

Relying solely on a handheld hasn't been a realistic option for most road warriors. But analysts at firms such as Gartner Inc. predict that it will be someday soon. And Apple Inc.'s release of the iPhone 3G last month has helped reinvigorate the laptop-vs.-handheld debate.

For Seppo Beumers, an applications manager at Genzyme Corp.'s European operations in Amsterdam, the idea of putting all the apps his users need onto a handheld is no longer theoretical. More than two years ago, Beumers began adding client contact management software and other sales tools to the BlackBerry handhelds carried by Genzyme's 150-plus pharmaceutical and medical-device sales reps in Europe.

"Gradually, we will lose the laptops," Beumers predicted. "That is the direction we are moving." He said that many of the sales reps don't need to write long reports while on the road and that they can use their BlackBerries for e-mail.

They also can enter information into the handhelds during meetings or immediately afterward, he noted. That lets the sales reps quickly share data with co-workers and saves them time that they used to spend entering handwritten notes into their laptops.

But Beumers added that any discussion of handhelds fully usurping laptops is still premature. To make that truly feasible, he said, the BlackBerry needs faster data-transmission speeds, more memory, a larger screen and better batteries.

Farpoint Group analyst Craig Mathias doesn't think most mobile workers will ever be able to carry just a handheld. "I call it the single-device paradox," he said. "There's no single device for everything, especially when you consider the input and display on a smart phone or handset."

Even slider phones or dual-keyboard flip devices can be too small for the kind of work that many business travelers need to do, such as writing reports or running PowerPoint presentations.

Brant Castellow, a regional sales executive at Correlagen Diagnostics Inc. in Waltham, Mass., understands all too well the paradox that Mathias described. Castellow recently bought an iPhone 3G and would love to use it for all of his communications and computing needs on business trips — but Correlagen's CRM applications and corporate VPN still require the use of a PC. As a result, he continues to cart along his laptop when traveling.

Castellow said via e-mail that he uses his PC less than he once did, but he noted that bringing it with him "might be a hard habit to break."

Colin Dickerson, an engineer at The Procter & Gamble Co.'s Gillette Engineering Group in Boston, said that for personal trips, he recently started leaving his laptop at home and taking only his iPhone with him. "I love having just one device to carry around," he said.

But Dickerson noted that for work purposes, "I don't see myself traveling without my laptop anytime soon." Even while away from the office, Dickerson needs to access heavy-duty engineering programs such as Unigraphics and AutoCAD, which he doesn't expect to be able to do with a smart phone in the near future.

As a compromise between laptops and handhelds, Mathias and other analysts expect many users to switch to sublaptops, such as the Asus Eee and the so-called mobile Internet devices being touted by Intel Corp. and various hardware vendors. ■

ISTOCK

ALL MFPs SORT PAGES.
THIS ONE SORTS YOUR OFFICE.
The HP Color LaserJet CM6040 MFP can help you take control of printing and copying. With tools like Web Jetadmin, IT can be more productive. It also limits help desk calls with automatic toner and maintenance alerts. It's part of a new breed of workflow-enhancing MFPs from HP. That's alternative thinking about printing.
hp.com/go/6040
WHAT DO YOU HAVE TO SAY?
hp

# Turning the Page On PCs Not An Easy Call For IT Execs

## How often should you replace your PCs? That all depends.

**By Patrick Thibodeau**

ASK WHAT seems like a simple question — How often should PCs be replaced? — and you'll find that for IT managers, the answer isn't so simple. And it's certainly not universal.

The correct answer at Grant Thornton LLP is 24 months. And next month, the Chicago-based accounting and management consulting firm plans to replace 5,000 laptop and desktop PCs that have reached the two-year usage limit.

At Southern Co., an electricity generator and utility operator in Atlanta that has about 23,000 PCs, the answer is three years for laptops. But 18 months ago, it began replacing desktop systems every four years.

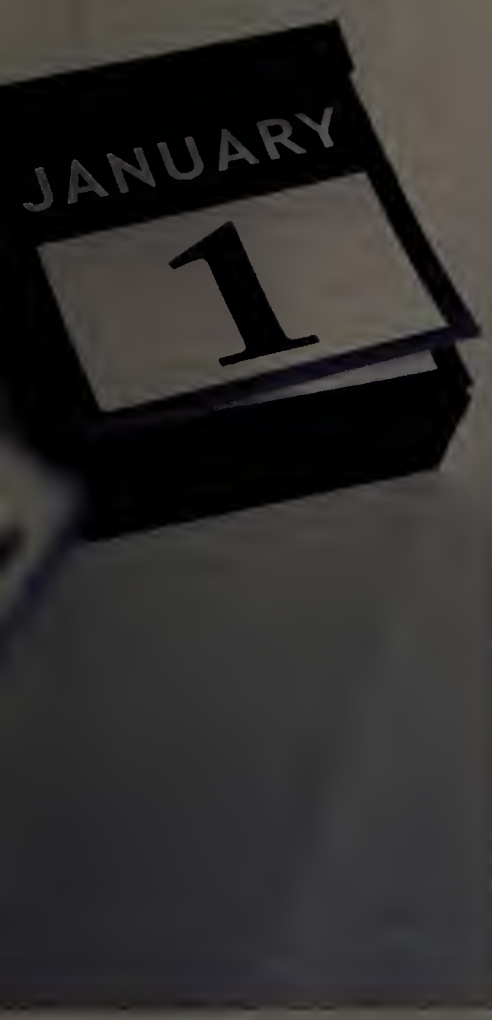
And Virgin Entertainment Group Inc. has no single answer to the PC replacement question. Instead, the Los Angeles-based company has an "on demand" refresh policy under which it replaces systems as needed, based on the business requirements of individual workers or departments. Some of its 700 PCs, in particular the desktops, may be four or even five years old.

For IT execs in general, financing arrangements, the ways PCs have been used, the need for more processing power to run resource-intensive applications, and "softer" issues — such as keeping younger employees happy by giving them new technology — can all be considerations in deciding when to replace systems.

But while there may not be any real consensus among companies, the broader IT trends point to an expanding period between PC refreshes.

Many companies have settled on a three-year refresh cycle for laptops and a four-year window for desktops, said Gartner Inc. analyst Leslie Fiering, who added that the replacement cycles have increased over the past few years. Four years isn't even out of the question for laptops or notebook PCs, Fiering said.

Of all the factors that can influence a PC replacement schedule, accounting may be the most important. And while the slowing economy may prompt some companies that treat their PCs as a capital expense to hold on to the systems longer, many businesses lease their equipment and are sticking with the refresh schedules in their contracts, as is the case at Grant Thornton.



ISTOCK

Dave Johnson, the firm's director of infrastructure and technology, said that he gets a higher residual value on systems by taking them under a shorter lease, thus helping to lower his overall costs. And, he said, the lease payments take the residual-value calculations into account, "so it doesn't necessarily pay to go out much beyond 30 to 36 months."

But financing issues aren't all that's in play. For instance, laptops are the point of the technology spear at Grant Thornton. Its work involves a lot of travel to client sites, which can be tough on IT equipment. Johnson said the durability of laptops is increasing, but not enough for him to extend his 24-month refresh cycle.

Another reason why the two-year cycle still makes sense for Johnson is that he can be certain the hardware he gives his users will meet their application needs for that amount of time. "The further out you go, the better your crystal ball needs to be as to exactly what you are going to be running three to four years from now," he said.

William Lewkowski, CIO at Metro Health Corp. in Wyoming, Mich., leases most of the health care provider's technology, including PCs and data center equipment. Lewkowski likes how the leasing approach drives IT upgrades.

"It forces us to keep current every three or three and a half years," he said.

But Lewkowski said he doesn't doubt that he could extend the life spans of some of his desktop systems in particular to four or five years, especially as he starts using virtualization technology to deliver applications to end users.

**"This younger workforce, they really want the latest tools. They're going to push us to be very progressive. It's not like the workforce of the past."**

**REBECCA BLALOCK,** CIO, SOUTHERN CO.

On the other hand, Virgin Entertainment CIO Robert Fort buys his IT gear and treats the purchases as a capital expense, which gives him more flexibility than he would have if he was leasing equipment. Then it becomes a question of how best to spend the company's IT dollars — on replacements of all PCs at regular intervals, or on what Fort described as "higher-priority activities"?

Fort's answer to that question is that replacing PCs on an as-needed basis makes the most sense. Each year, he sets a baseline configuration standard with his PC vendor that any new systems must meet. But deciding when individual PCs should be replaced can depend on factors such as application needs and the amount of on-the-road use that they get, Fort said.

Rebecca Blalock, Southern Co.'s CIO, said she thinks desktop technology "has stabilized enough" to make a four-year refresh cycle on those systems feasible for users. But there's still a need to stick to three years on laptops, Blalock said, and she doesn't see the life cycle for either laptops or desktops getting much longer.

With new processors still arriving at a Moore's Law pace of every 18 months or so, the cost of computing power continues to decline rapidly, Blalock said. And software vendors continue to develop applications that are more functional and require more processing power, she pointed out.

There's also the need to meet the expectations of employees, especially young, IT-savvy ones. "This younger workforce, they really want the latest tools," Blalock said. "They're going to push us to be very progressive. It's not like the workforce of the past."

Steve Rubinow, CIO at NYSE Euronext Inc., which operates the New York Stock Exchange, said he sometimes hears complaints about laptops even from workers who do nothing more than run Word.

The NYSE uses a combination of blanket upgrades and replacements based on use. For instance, some developers may still be walking around with four-year-old laptops, while frequent travelers may get new machines much sooner.

"The rule of thumb is still three years," Rubinow said. But, he added, "it's as much driven by accounting mentality as it is by technology changes." ■

# On the Mark

**HOT TRENDS ■ NEW PRODUCT NEWS ■ INDUSTRY BUZZ BY MARK HALL**

MATTHEW FAULKNER

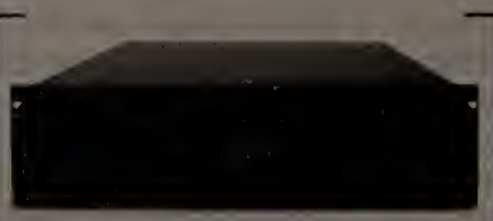
## The Rise of Videoconferencing

WITH AIRLINES adding new fees just about every day (Delta now charges $50 for a second checked bag), videoconferencing has never looked more promising.

Products already crowd the market, and vendors have more on the way, many of them offering easy-to-use, high-definition video and audio at reasonable costs.

Take Polycom Inc. in Pleasanton, Calif., for example. According to John Antanaitis, vice president of product marketing, the Converged Management Application (CMA) appliances that Polycom plans to ship in October have a little something for both IT and the end user.

The CMA line will let IT provision video services and apply policies,



**Paired with Polycom's CMA line of products, the RMX lets end users make multipoint videoconference calls.**

using LDAP or Active Directory, on things such as least-cost routing and dynamic bandwidth-allocation priorities. And, Antanaitis says, the system gives Windows users a simple client to create videoconferencing contacts, check their availability and initiate two-way video sessions. Combined with the company's RMX multipoint conferencing system, the CMA lets users run interactive videoconferences for numerous locations. The CMA 4000 can handle up to 400 devices. Its big brother, the CMA 5000, supports up to 5,000 devices.

Pricing for 200 CMA 4000 device licenses starts at $20,000.

## Search the Entire Enterprise Easily

A single enterprise search system that covers both structured and unstructured data repositories makes a lot of sense. But giving end users both the power of SQL queries and the simplicity of traditional search is hard. Andrew McKay, senior vice president of products at Attivio Inc. in Newton, Mass., claims that his company's Active Intelligence Engine (AIE) "has the precision of SQL and the fuzziness of search."

Not only can the software index and store a database's tabular content, he says, but AIE will also note potential joins among the tables. If an end user's search could benefit from joining the tables, McKay says, AIE will do the joins and combine the information with the search results.

Shipping now, AIE 1.2 takes up a mere 20MB of storage capacity, though it can index up to 1 million documents per server. McKay says you can add hardware on the fly without having to reindex the other servers. Pricing varies.

## Back Up Oracle Apps

Started in 1991 as the Advanced Maryland Automatic Network Disk Archiver at the University of Maryland, the Amanda open-source backup software project is a favorite among systems administrators. Sunnyvale, Calif.-based Zmanda Inc., which offers both open-source and commercial versions of the tool, this week started shipping its agent for Oracle 10g and 11g systems.

**Kant: Back up Oracle databases with open source.**

CEO Chander Kant says the value of open source is magnified when it comes to backup software. If you have a seven-year document-retention policy and your proprietary backup software supplier goes out of business, Kant argues, you will need to keep at least some remnant of the old technology around for seven years in order to recover the data for, say, governance purposes.

But if your backup software's source code conforms to industry standards, Kant contends, you're less likely to face operational restrictions involving your backup tools in the years ahead. That's why Zmanda has included support for Oracle's popular Recovery Manager module. Zmanda will back up Oracle applications running on Linux, Solaris or Windows systems. For the latter, it integrates with Microsoft's Visual Shadow Copy Service to ease the archiving of Windows data.

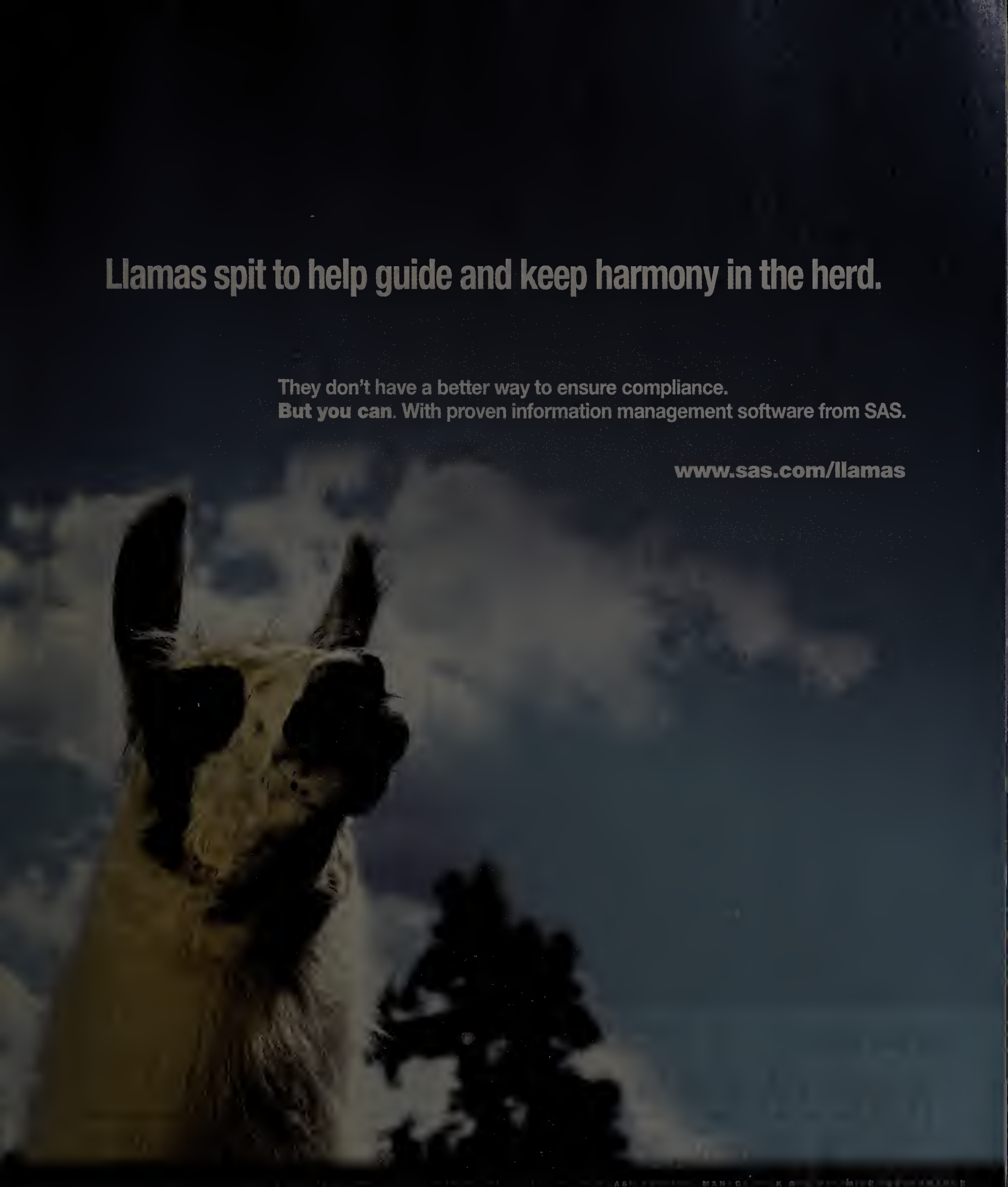
Zmanda Oracle Agent works with Amanda Release 2.6.4. Pricing starts at $300 per server. ■

**MORE BUZZ**
Discover and discuss more industry action at the On the Mark blog: **blogs.computerworld.com/hall**

# Llamas spit to help guide and keep harmony in the herd.

They don't have a better way to ensure compliance.
**But you can.** With proven information management software from SAS.

**www.sas.com/llamas**



SAS SOFTWARE, AT WORK IN 97% OF THE TOP 100 COMPANIES ON THE 2007 FORTUNE 500.

sas

THE POWER TO KNOW.

PHOTOS BY ROBERT A. DODDS

## Dossier

**Name:** Jorge Mata

**Title:** CIO

**Organization:** Los Angeles Community College District

**Location:** Los Angeles

**Favorite technology:** The Internet

**Favorite movie:** "*Aliens*, where the women are heroes."

**Favorite vice:** Tequila

**Role model:** The Rev. Martin Luther King Jr.

**Most interesting thing people don't know about him:** "I was conceived in the U.S. but born in Mexico. My parents moved back to the U.S. three weeks later. My mother took me to Mexico to be born, saying she didn't want me to be confused about my background."

■ THE GRILL

# Jorge Mata

## The **L.A. Community Colleges CIO** talks about **finessing the politics of education, keeping IT vendors honest** and **making a difference** to students.

*Last year, Jorge Mata became CIO for the Los Angeles Community College District, a federation of nine colleges and several satellite campuses serving 140,000 students and 10,000 staffers with an IT shop of 70 workers.*

**Is it difficult to lead such a diverse organization?** Because we're a federation of nine colleges with a CEO on each campus, getting everybody to agree is difficult. So I envision my role as CIO as creating opportunities to come to consensus. The political role is crucial. The people with the trump power are faculty with tenure. They are experts in the instructional field, and we in IT have to defer to them in many areas, which makes sense because education is our mission. That concept is really alien to some people, but it compares to the way businesses relate to their salespeople, who bring in the revenues.

**What's your biggest IT challenge right now?** We have an aging student-information system, the equivalent of the ERP for higher ed. It has everything from registration to enrollment, and the course schedule is the crown jewel, since that drives our revenue. If we don't offer the right courses,

*Continued on page 22*

# Work with InterSystems.

## Not separate systems.

## The fastest way to have a connected workplace.

Work with InterSystems **Ensemble**® software to raise productivity and lower costs.

Ensemble is a rapid integration and development platform that makes it much easier to connect applications, processes, and people. IT managers who have switched from other integration products report they can finish projects in half the time with Ensemble.

For your future development efforts, if you embed Ensemble you can create a new class of applications that are connectable. Plus, you'll be able to enhance *legacy* applications with adaptable workflow, browser-based user interfaces, rules-based business processes, dashboards, and other innovations – without rewriting your code.

Ensemble's technology stack includes the world's fastest object database – InterSystems **Caché**®. Caché's lightning speed, massive scalability, and rapid development environment give Ensemble unmatched capabilities.

For 30 years, we've been a creative technology partner for leading enterprises that rely on the high performance of our products. Ensemble and Caché are so reliable that the world's best hospitals use them for life-or-death systems.

INTERSYSTEMS

See product demonstrations at **InterSystems.com/Connect14A**

© 2008 InterSystems Corporation. All rights reserved. InterSystems Ensemble and InterSystems Caché are registered trademarks of InterSystems Corporation. Other product names are the trademarks of their respective vendors. 8·08 Work14 CoWo

# THE LOCALS CALL US IBM.

Welcome to IBM Express Advantage,™ with hundreds of proven solutions designed for the needs of mid-sized companies. Whether on your block or in your area, our local Business Partners are experienced in your industry and market. From consultants and integrators to software vendors and distributors, they can help customize solutions to fit your company's specific needs. It's innovation made easy. From the people and Business Partners of IBM.

IBM, the IBM logo, ibm.com and Express Advantage are registered trademarks or trademarks of International Business Machines Corporation in the United States and/or other countries. ©Copyright IBM Corporation 2007 All rights reserved.

PROVEN SOLUTIONS

EASY FINANCING

CONCIERGE SERVICE

LOCAL PARTNERS

IBM express advantage™

Innovation made easy.
ibm.com/ibmaccess or 1-877-IBM-ACCESS.

**"I would make more money outside, but I don't know if I'd be happier.**

*Continued from page 18*

people won't take [what's offered]. We can't outsource [course scheduling], because it's art and skill and politics embodied in one document.

It takes intimate knowledge of why people take certain courses, something brought to the table by the department chairs and administrators. The biggest problem with it is that it's a terminal-based system in a Web world, so there are green screens. We have a lot of soul searching on what to do with it.

**How can you operate with so few IT employees?** We understand we have to put dollars into classrooms, which are also becoming digital, so our discussion is what is the right balance. IT didn't even interact with students 30 years ago. Now IT is often the first thing our students see of our organization.

**How can you keep pace with students demanding Wi-Fi and other technologies?** Students are very savvy, and they'll find the educational institutions that meet their needs. We don't need to be bleeding-edge, but we can't delay innovations forever. For example, we don't have wireless access in all areas. We find students want more online courses and can be frustrated when they [see] many courses online and find the one they must take is not online.

They want Wi-Fi in more places, too. From an educational standpoint, I agree them, because we're entirely a commuter school. We know that the longer students are on campus, the greater their chances of success.

**With Wi-Fi and college kids, have you been hacked?** Not that I am aware of. But I know it's not a question of if, but when. It's impossible to protect everything, but it is possible to plan what to do when a breach occurs. We think we're more likely to be a launch point, the source, with high-speed access, for hacks on somewhere else.

**As your college district grows and changes, have you gained an advantage in dealing with technology vendors?** We have education discounts, of course, which reduces our management overhead, and we use a contracting alliance to find the lowest prices. We can evaluate vendors so that if there is a competitor, we will know if it's a good price. We also have Microsoft campus agreements, which means we buy a license for the entire campus, which has freed us from being the licensing police.

We have found savings by standardizing on equipment and recently began using two types of desktops from Dell and HP instead of using 40 models. One thing we'd like from more vendors is that they offer students comparable pricing to what we pay for software or hardware, if we can prove they are students.

**How do you keep your technology vendors honest?** We have actively courted some vendors as strategic partners, such as Microsoft, HP and Cisco, and we have a nondisclosure agreement with them so that they are able to tell us what's coming in technology and we can align our decision-making with their road maps. We know the road maps aren't promises, but it tells where they are focused. We have yearly briefings with them and have rules of engagement.

We're brutally honest with them, too. Sometimes I say their technology is great for a four-year college but horrible for a two-year college and here's why, and sometimes they have said, "Oh, we hadn't thought about that."

**Since you are part of an educational institution, do you have a tight policy on accepting vendor gifts?** I asked our legal department about this, and they said gifts under $10 are allowed, but above that, you have to fill out a form where you itemize anything over that amount.

I was at a storage conference in Las Vegas where one of the vendor giveaways was actually a Mercedes convertible. I wouldn't put my card into the drawing because if I'd won it, that would be completely unethical. Taking a lunch is OK, because that's a part of doing business if you discuss matters. But a $500 dinner — it's better not to get into those situations.

When we run trials of equipment or software, we are careful that they come with return stickers on the box, which guarantees it is a just a test, not a demo forever.

**Is it hard to keep good IT workers, especially since they get lower pay than a company would offer?** It's hard to compete on dollars alone. On the other hand, if they are hired by us, we note that there's much less stress, and it's more rewarding, and the benefits are very hard to beat.

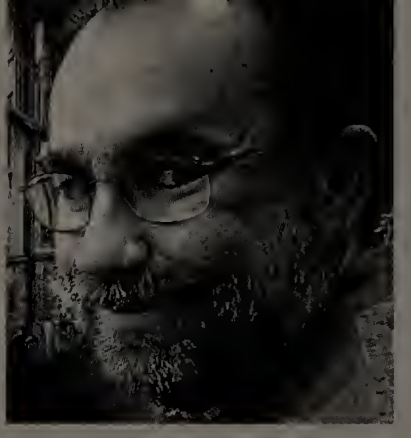
Our quality of life is much higher here. I would make more money outside, but I don't know if I'd be happier. I tell my team that we change people's lives here. If we do a good job, it might be that tiny thing that pushes a student into success.

— *Interview by* **Matt Hamblen**

■ OPINION

Steven J. Vaughan-Nichols

# Windows' Days May Be Numbered



COULD MICROSOFT be switching away from Windows?

Some very interesting documents have been leaking out of Microsoft. They clearly indicate, believe it or not, that Microsoft is considering shifting its users from Windows to a new operating system: Midori.

And, when I say "new," I mean *new*. This isn't the kind of lip-service change that we saw with David Cutler and NT or Jim Allchin and Vista. Midori, under Eric Rudder, senior vice president for technical strategy, isn't a cosmetic change; it's a completely new operating system.

Midori is being designed from the ground up to be a distributed operating system running on top of multiple hardware systems and virtual machines. That's one heck of a change from what has always been a single-user operating system designed for a stand-alone PC.

That design is a big reason why Windows is the insecure mess that has kept Symantec, McAfee and dozens of other anti-malware companies in business for decades. Despite that, Microsoft has never dared to change Windows too much, because it has been a cash cow. Now, things seem to be changing.

No one would dare let me enter the halls of the Microsoft campus, so I can only imagine that Midori started as a skunkworks project. Its purpose was probably to try out some ideas. That kind of project gets started all the time in major technology companies. Most of them amount to little. Why would Midori take on a life of its own?

I think it's because Vista's dismal market performance really shocked Microsoft. The company has had plenty of other failures — Microsoft Bob quickly comes to mind — but Vista is a failure of epic proportions. The reason both Mac OS and Linux are gaining ground on Windows is that people are rejecting Vista (much as I'd like to give the credit to their advantages).

**■ Vista's dismal market performance really shocked Microsoft.**

Now, you may not believe that the Linux desktop or the Mac is really taking market share from Windows, but they are. In the U.K., Linux was preinstalled on 2.9% of all PCs sold in June. Meanwhile, 14% of all PCs sold in the U.S. are Macs. People are no longer mindlessly buying Windows systems, and Microsoft knows that.

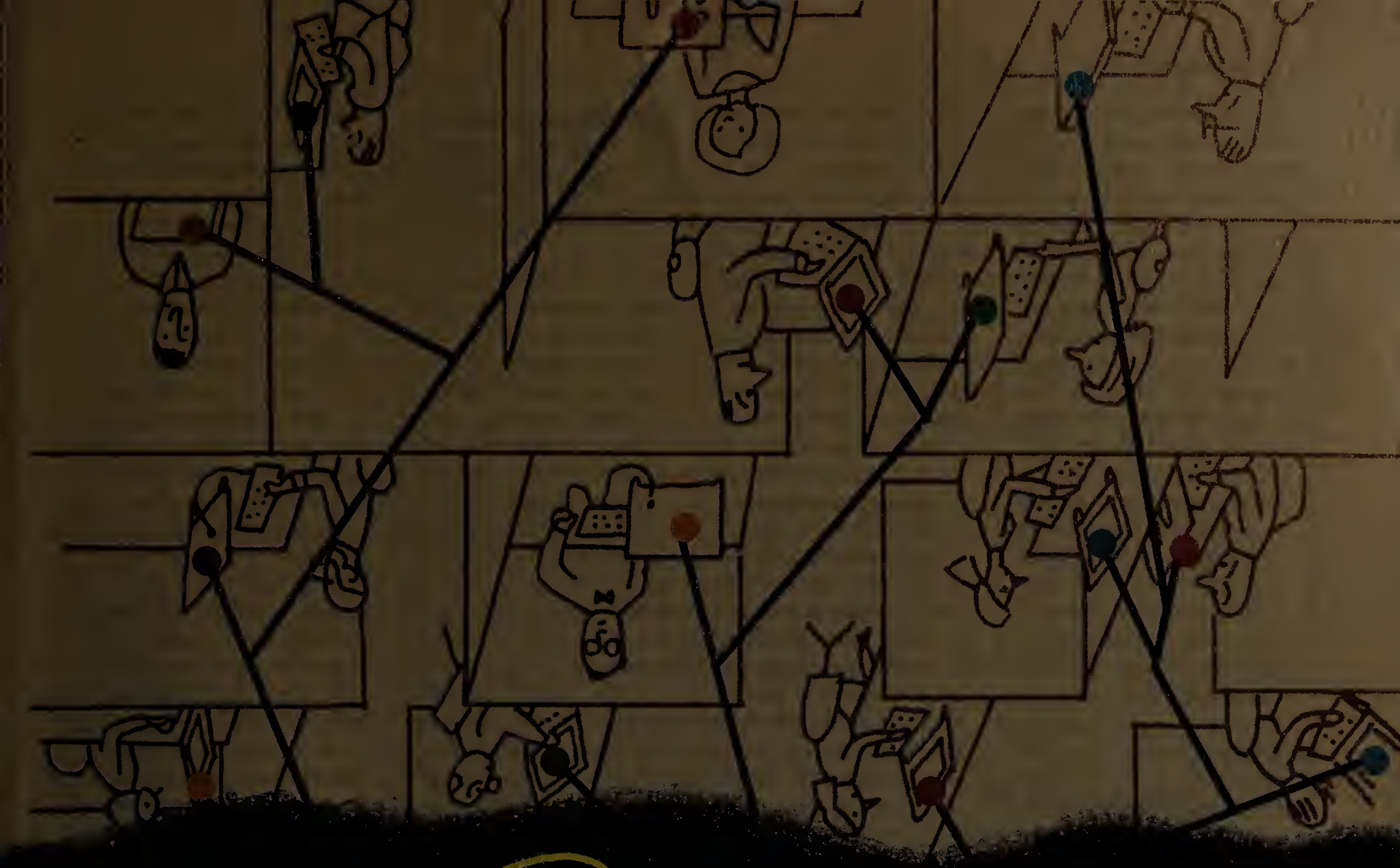
The company has tried to con — uh, *convince* — people that Vista really is a good operating system, with its painful Mojave Experiment Web site. The site crashed Safari on my MacBook Pro and wouldn't render on Firefox on my openSUSE Linux PC. When I finally did get it to show up on an XP SP3 system, I was told it was *my* fault that I was having trouble with Vista. That's a surefire way to make me want to buy Vista.

Windows has had a long run, too long really. It can't be twisted into an operating system that can handle a world where processing power may be on the desktop or in a cloud, and where networking is a given. Microsoft needs something different.

But can it be serious about dropping Windows? I think it is. Vista has been a wake-up call that the company can't simply keep reinventing the same old thing. At the same time, Microsoft knows, of course, that it can't afford to alienate its customers, so the plan is to include Windows legacy support by way of virtualization. This path should enable Microsoft to provide the outstanding legacy application support it will need to keep end users happy.

Having said all this, do I think Microsoft will actually follow through? Not for a while, if at all. I can't see Midori coming out before 2013. The real question is, will Steve Ballmer make it happen? I can't see it. I can't hold the word *vision* and Ballmer in my head at the same time. If Microsoft changes management, Midori will turn into reality. If he stays in charge, we'll be seeing Windows 7 SP1 or, as I prefer to think of it, Vista SP4. ■

**Steven J. Vaughan-Nichols** *has been writing about technology and the business of technology since CP/M-80 was cutting edge and 300bit/sec. was a fast Internet connection — and we liked it! He can be reached at sjvn@vna1.com.*



# SOCIAL NETWORKING GOES CORPORATE

As Facebook-like apps infiltrate the enterprise, they're integrating the workforce in unforeseen ways. **By Mary Brandel**

MICROSOFT calls it TownSquare. Deloitte hosts D Street. IBM has its Beehive, and Best Buy its BlueShirt Nation.

No, it's not a real estate explosion. In industries from retail to high tech, banking and manufacturing, companies are increasingly building networks behind the firewall where employees can create profiles and connect with one another in ways first demonstrated by LinkedIn, Facebook and MySpace.

"The whole Web 2.0 explosion has moved from the consumer and college student world to professionals in the business world," says Amy Shuen, author of *Web 2.0: A Strategy Guide.* (O'Reilly Media, 2008). "Employees are seeing this as a way of enlarging their sphere and interacting with colleagues."

It's more than an electronic water cooler, she says. Companies may start with the idea of helping employees feel more connected, but that's just the beginning. With easier and faster connections among people, suddenly cross-division collaboration happens more naturally, leading to greater innovation. "People don't just chat; they connect with people and end up talking about things that have an impact on the business," Shuen says.

Forrester Research Inc. agrees that 2008 is a time of rapid adoption of internal social networking, citing software suites that include social networking features, such as Awareness Inc.'s Enterprise Social Media, Jive Software's Clearspace, IBM's Lotus Connections and Microsoft's SharePoint.

Here are three companies that are already seeing benefits from early adoption of internal social networking.

## DELOITTE LLP: D STREET

The idea for Deloitte's D Street began when the firm's talent organization wanted to make a large company feel smaller. In addition, it wanted to create an environment that would appeal to its mostly younger workforce. At a company where the average age of employees is 28, "we knew we had challenges to win the talent war," says Patricia Romeo, the leader of D Street. But in January 2007, when the group began to create the business case for the social networking environment, it also started to envision some of the side benefits the initiative might engender.

For instance, by enabling connections among employees, the company could more easily offer flexible work arrangements, establish virtual teams, bring new employees up to speed, improve collaboration and increase retention among people who hadn't felt a strong sense of belonging.

After getting the support of Deloitte leadership and partnering with internal IT, communications and knowledge management groups, the team launched the alpha version of D Street in June 2007, basing it on a commercially available collaborative platform. The initial rollout was to 1,500 employees.

Romeo describes D Street as having capabilities similar to Facebook's, except that profiles are prepopulated

with basic information, including name, job title and contact information. Employees can personalize the profiles with things like photographs, résumés, work and community affiliations, and former employers. D Street enables workers to introduce colleagues to one another, list external social network memberships and write blogs. There's also a "guest book," in which visitors can leave comments.

Deloitte's : "We knew we had challenges to win the talent war."

And D Street helps people connect. An employee who searches on "Web 2.0," for example, will find other people interested in that topic, as well as their connection to him.

Since few employees personalized their profiles initially, early adoption was slow, Romeo says. "People aren't going to go in as readily when the well is 75% empty," she explains. But with the encouragement of leadership, more people got involved, and they were soon demanding access to the rest of the organization.

Next, the development team tweaked the system with enhancements such as reporting capabilities and launched it this year to Deloitte's shared services organization. Currently, all 46,000 members of the organization are in the system.

According to Romeo, 400 to 500 employees have been personalizing their profiles each week, meeting a goal of involvement by 25% of staffers in the first eight weeks.

Avinash Jhangiani, a senior consultant at Deloitte Consulting LLP, says D Street has helped him expand his internal contacts at the company, which is especially helpful because he's a mobile worker. For instance, he says, the organizing committee for Deloitte's community service initiative found him on D Street via a simple people and keyword search.

"From there, I was asked to join a volunteer project that allowed me to share my passion with nonprofit organizations and help them build their online presence," he says. "What a cool way to enhance my personal brand within the organization."

A gap still exists between collaboration evangelists and those for whom "it's just not part of their DNA," says Romeo. To encourage reluctant people, the team will continue educating employees about the value of collaborative technology, and it plans to expand the technology to increase D Street's value and utility.

That brings up another challenge: to not be diverted by some users' desire to add new features. "We're going slower than what our users would like, but we want to be strategic" about making enhancements, Romeo says.

**ROMEO'S ADVICE:** Continue to build leadership support, even after the early-stage buy-in. "Make sure support is there throughout the organization," she says. Once the platform begins filling with valuable content, she adds, "it's really about viral adoption."

## IBM: BEEHIVE

Eight years ago, IBM created BluePages, a Web-based corporate directory that includes profiles with contact information, employee photographs, name pronunciation, experience, self-descriptions, bookmarks and blog entries, as well as "friending" and information-tagging capabilities.

IBM's JEFF SCHICK: "Poor user adoption is rarely because users didn't know how but rather didn't see why."

"Very early on, we recognized the importance of connecting people within IBM and moving beyond a static view of the individual," says Jeff Schick, vice president of social software. The heavily used directory includes 450,000 employees and gets 6 million lookups per day.

With an initiative called Beehive, IBM is experimenting further. The application uses the code base of BluePages, which is based on Lotus Connections, but it's a separate system.

Beehive is intended as a collaborative platform that emulates the physical work environment, where employees display personal items like photographs and trophies and chat about last night's game. "We've added new dimensions to the profile capability to create the old-fashioned camaraderie of the office," Schick says. The idea is to discover whether what Schick calls "the water cooler effect" will help people build stronger relationships and thus create a more effective organization.

For Michael Ackerbauer, a manager in the CIO's office at IBM, the results are already in. He learned about Beehive a year ago, and "I quickly got hooked," he says, especially since he manages a team of developers who work remotely. "It's valuable for the team to get to know me on a personal level, and I like to get to know them."

Ackerbauer says he can now connect with people on a social level that's typically absent when working remotely. Such connections help his teammates relate to one another like human beings and not just as resources or assets. Just recently, Ackerbauer says, he ended up speaking at a technology leadership conference, thanks to a connection he made with another employee who wouldn't have otherwise known he had expertise in the subject area.

Despite its experimental status, Beehive's user population has grown to 38,000 in nine months, mainly through viral adoption. "People find it through word of mouth, when others blog about it or bookmark it," Schick says. Adoption is strongest in the areas of product management, HR, talent management and the global services consulting business.

Because Beehive is behind the firewall, Ackerbauer says, people feel free to discuss internal business topics. For instance, he has used Beehive to explain his views on the topic of breakthrough thinking. "I've had people come up to me and say, 'I didn't know you knew all that stuff. Can we talk more?' " Ackerbauer says. "The connections lead to collaboration, which leads to innovation, which leads to transformations in the industries IBM serves."

**SCHICK'S ADVICE:** Be aware that one size does not fit all. To increase involvement, you need to explain the story of social software from multiple perspectives.

"What appeals to some will make others almost cringe," he says. For instance, new employees may want to

## THE WHYS OF SOCIAL NETWORKING

Employees tend to have at least one of four goals when they use social networks, according to Amy Shuen, author of *Web 2.0: A Strategy Guide*. The first two are common, she says; the second two are more cutting-edge.

**1** **[illegible]** In their profiles, people can list skills, expertise and experience, as well as previous employers and people they know. As with LinkedIn, this helps simplify the job of locating people with the knowledge they need. "It's a way of leapfrogging quickly through several degrees of separation to find out who knows something on a topic that's of importance to you," Shuen says. This is particularly useful inside multidivisional and multinational organizations, she says.

**2** **EXPANSION OF SOCIAL CONNECTIONS AND BROADENING OF AFFILIATIONS.** This is the Facebook model, Shuen says, in which the goal is to get to know people better online by interacting with them and keeping up with their personal information. "It's about decreasing your social distance virtually," Shuen explains.

**3** **SELF-BRANDING AND EXPRESSION OF A PERSONAL DIGITAL IDENTITY AND REPUTATION.** Before long, people get creative with their profiles and begin to think about how they want to be known in the company. This is along the lines of a Flickr account or a personal blog or Web page. "Web 2.0 is deeply changing the expectations of knowledge workers as to how they can build their own personal brand within a corporation, not just find knowledge they need or socialize," Shuen says.

**4** **[illegible]** On social networks, the viral distribution of knowledge becomes important. For instance, people want to know how many of their "friends" have recommended a video or have joined a community. And in turn, if they discover something cool, they want to spread the word. "This sense of benchmarking against others in social networking is different from anything we've seen before," Shuen says.

– MARY BRANDEL

use social software to increase their visibility, while veterans may be motivated to keep people informed. Similarly, he says, focus more on *why* than on *how* in your training program.

"Knowledge workers today have no time to add new activities to their day; they're looking for how to work smarter," Schick says. "Poor user adoption is rarely because users didn't know how but rather didn't see why."

### BEST BUY: BLUESHIRT NATION

Two years into implementing BlueShirt Nation (BSN) at Best Buy Co., Gary Koelling and Steve Bendt see internal social networks as organic entities. Many of the goals they had for the platform in 2006 had to be scrapped once the site — which now hosts more than 20,000 participants — took off.

Now senior manager of social technology, Koelling was a creative director in Best Buy's advertising organization when he and Bendt first thought of using technology to harvest marketing ideas from store employees. "The promise of being able to go out and tap into 140,000 employees and use computer magic to do it was really attractive to us," Koelling says. He figured it was a matter of gathering support, getting funding and laying out the steps to meet that goal.

Instead, "we got schooled quickly that not only did we not know about [technology], we also didn't know how people would react to a planned social network," he says.

For instance, instead of providing answers to Koelling's and Bendt's questions, participants preferred to talk about World of Warcraft or something funny that happened at work.

BSN is based on open-source software, and since internal IT lacked those skills, Koelling hired a development firm. The network was promoted virally; all participants found it through referrals or word of mouth.

On the site, employees can create their own profiles and host forums on topics of their choosing. The result, Koelling says, "is more scrumptious than what we hoped for."

Now that employees are connected, the site is rich with idea exchanges and discussions that have even helped change company policies. For instance, when one employee posted his thoughts on why it would be beneficial for all full-time employees to have e-mail access, it sparked a conversation that eventually led to a shift in policy to enable just that.

To Nick Pfeifer, a retail associate in one of Best Buy's Colorado Springs stores, the site provides a social outlet, a protected place to discuss work-related topics and a way to close the gap between store workers and corporate employees. "As with any big company, it's easy for the message of the customers to be lost when you don't turn your attention to the people who interact with them on a regular basis," he says. "Until BSN, there's always been a schism between the two."

To help close that gap, the site now includes an application called Loop Marketplace, where people can post new ideas, with the hope that a Best Buy executive will notice one and fund it. The challenge is to encourage more execs to visit it, Koelling says. "We're trying to find ways to make visiting the Loop Marketplace a part of their workflow."

Best Buy's **GARY KOELLING:** "[BlueShirt Nation] is more scrumptious than what we hoped for."

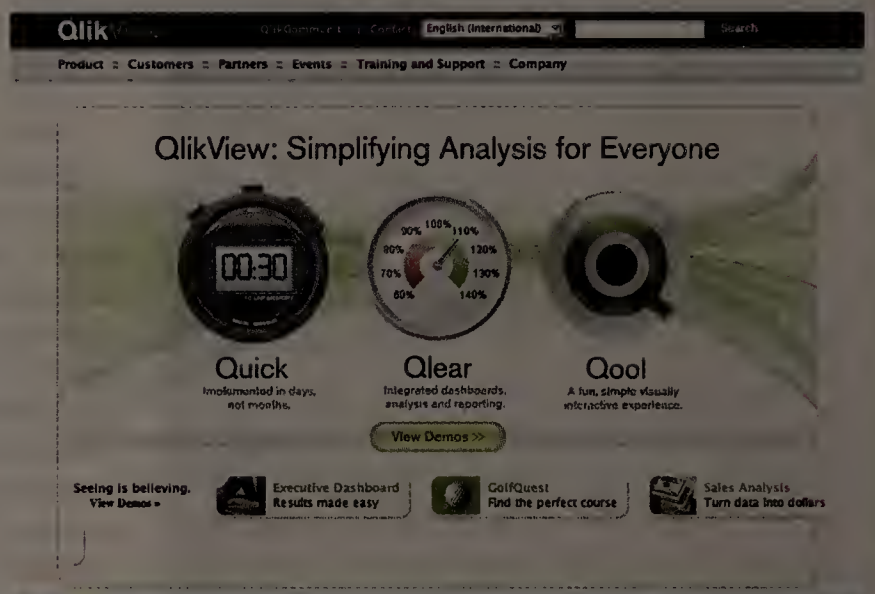
There have been plenty of mistakes along the way, Koelling says. For instance, some users wanted to adopt a system in which people received points based on their participation on the network. But once he initiated that, Koelling learned quickly that most people thought it was elitist.

**KOELLING'S ADVICE:** Understand that on a social network, everyone shares equal status, even the person who runs it. "When the user tells me, 'This is how I want to use it,' I have to do whatever I can to accommodate that," he says. ■

**Brandel** *is a* Computerworld *contributing writer in Newton, Mass. Contact her at marybrandel@verizon.net.*

# Software That Saves Lives

## BI software helps doctors make smart choices for patients. By Mary K. Pratt




**A Swedish hospital is using QlikView to analyze patient data and likely medical outcomes, thus reducing the rate of complications.**

THE STATISTICS were telling: 15% to 20% of neurosurgery patients developed infections in the drains that neurosurgeons implanted to draw away fluids, a complication that not only threatened lives, but also led to hundreds of thousands of dollars in treatment costs annually.

Dr. Daniel Stålhammar, a neurosurgeon for 40 years, believed his hospital, Sahlgrenska University Hospital in Gothenburg, Sweden, could do better. He turned to computers for help.

That may not be surprising, but his choice of IT tools is: Stålhammar picked business intelligence software to improve patient outcomes and ultimately save lives.

"I needed to handle large databases and have tools to make proper decisions on which patients were to be selected for specialized and very expensive care," he says.

Stålhammar used QlikTech International AB's QlikView to analyze multiple databases containing patient information against established medical measurements and likely outcomes. This tool has helped the hospital reduce its rate of medical complications, sparing patients any additional pain and problems and eliminating the need for many costly tests and treatments.

"Certainly, [this accomplishment] would be possible without technology, but that would take a lot of work [from] several people working continuously. That costs a lot, and it is very difficult to keep performance 24 hours a day on the highest level. There will be mistakes, misunderstandings, etc., resulting in repeated failures," says Stålhammar. "By automatic alerts provided by QlikView, this will simply not happen."

> **"I needed to handle large databases and have tools to make proper decisions on which patients were to be selected for specialized and very expensive care.**
> **DR. DANIEL STÅLHAMMAR,** NEUROSURGEON, SAHLGRENSKA UNIVERSITY HOSPITAL

This innovative use of QlikView software earned QlikTech International and Stålhammar's project a victory in the Business & Related Services category in the *Computerworld* Honors Program.

To be sure, Stålhammar was no stranger to using software prior to implementing the BI application. He had used other IT tools, such as Excel, to help sort and analyze data. And he had worked on computerizing patient

*Continued on page 30*

### AT A GLANCE

■ **QlikTech International AB is a business intelligence software vendor with global headquarters in Lund, Sweden, and U.S. headquarters in Radnor, Pa. Its product, QlikView, has more than 265,000 users in 74 countries. QlikView is deployed at Gothenburg, Sweden-based Sahlgrenska University Hospital, northern Europe's largest hospital.**

■ **Dr. Daniel Stålhammar, a neurosurgeon for 40 years at Sahlgrenska University Hospital, worked with Johan Rylander, a QlikTech solutions consultant, to deploy QlikView to analyze patient data, likely outcomes and treatment options.**

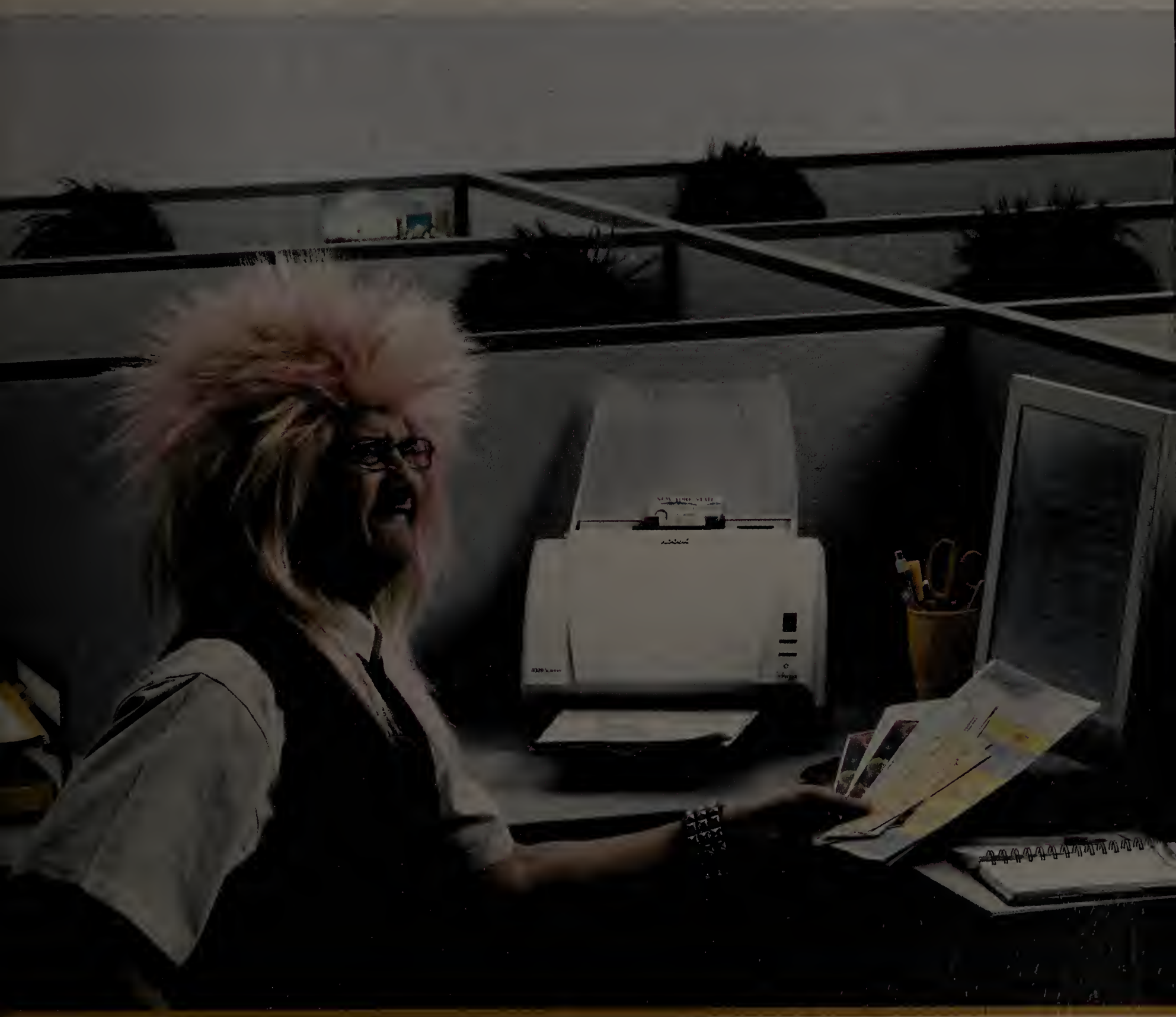
■ **Stålhammar's deployment and use of QlikView required limited IT support, but two IT workers will work part time to support the Department of Orthopaedic Surgery's deployment and management of QlikView.**

■ **The cost of implementing QlikView to analyze neurosurgery patient data was about 550,000 Swedish Krona ($90,000 U.S.). Its ROI: QlikView allows caregivers to analyze data more completely and more quickly, helping them eliminate infections and save lives. It also saves money. A University of Gothenburg study concluded that eliminating infections in drains implanted in patients to draw away fluids frees up about 100 hospital days, yielding savings of about $400,000. Meanwhile, the Department of Orthopaedic Surgery spent about $165,000 on its QlikView implementation.**

**With our scanners, everyone's into heavy metal.** What's different about **Kodak** i1200 and i1300 Series Scanners? It's what's inside: a heavy-duty metal paper transport that's reliable scan after scan. Take the insider's online "tour." **We'll show you what makes these scanners rock.**

**Kodak** i1200 & i1300 Series Scanners

**Kodak**



Visit kodak.com/go/heavymetal

© Kodak, 2008. Kodak is a trademark.

*Continued from page 28*
records at his hospital.

Such experiences, he says, allowed him to recognize how computers could help doctors make critical decisions by providing them with analysis of information that they just couldn't access quickly enough through manual systems. And when he saw another hospital using QlikView, he saw the possibilities that this particular application could bring to his own medical work.

"I understood how extremely fast they could make searches, and how they could combine all data in an illustrated way," he says.

For Stålhammar, the choice made sense, even though his hospital's administration used other BI applications for analyzing data. QlikView seemed to work faster than other systems, he says, and that was important, since the information is needed to make quick, informed decisions on patient care. Plus, QlikView presented information in a visual fashion that made it easy to see associations between data.

"You could see these patterns with other tools, but it was much easier with QlikView," Stålhammar says.

## PREDICTING OUTCOMES

Stålhammar wanted the application to process medical tests and observations from neurosurgery patients alongside likely outcomes, to determine patterns and the best treatment protocols.

"There are a number of predictors for head injury patients. You can weigh them together to get a score, and you can do that rather early and see [whether a] patient is in danger of a bad development," Stålhammar says.

The predictors include a patient's age, cranial pressure and white blood cell counts. Taken together, those metrics can indicate potentially life-threatening complications.

Stålhammar worked with the hospital IT staff to develop the tool, turning to Johan Rylander, a solutions consultant at QlikTech, for support. Although Stålhammar's use of QlikView isn't typical, pulling together the application wasn't particularly tricky, Rylander says.

> **"Business intelligence is definitely exploding in every market segment, because intelligence is the main competitive differentiator these days.**
> **BORIS EVELSON,** ANALYST, FORRESTER RESEARCH INC.

"All the data sources were already defined. Dr. Stålhammar already knew what he needed, and I helped him to translate his ideas," explains Rylander.

But challenges still arose, of course. Stålhammar wanted to display several lab results in a single chart, yet those lab results all used different scales. Those differences forced Rylander to find ways to manipulate the code to create accurate, compatible and understandable displays.

It was also a challenge to integrate pictures, which take up a lot of memory, Rylander says. To deal with that, he put in links to pictures, allowing users to call up only the images needed without putting them in the QlikView file itself.

Stålhammar first started using QlikView in 2001. But after he retired in 2007, the project lost momentum — a fate that can befall many IT initiatives that lack a project champion to lobby for them.

Meanwhile, Stålhammar's colleagues in other departments have expressed interest in the QlikView system but, he says, "the doctors in Sweden have been remarkably slow to adopt this new technology."

There is some movement, however. Dr. Peter Nyberg, chief of the Department of Orthopedic Surgery at Sahlgrenska University Hospital, is following Stålhammar's example and using QlikView to analyze patient data to improve care.

"My interest is to get quick and reliable analysis from a quality system," Nyberg says, explaining that in the past, there have been challenges in connecting the different hospital databases and getting useful analysis from them.

Despite those earlier challenges, Nyberg decided to try QlikView based on Stålhammar's experience.

"Why should hospital personnel take hours or weeks [finding that data]? What they really want is to have the results," Nyberg says.

Boris Evelson, an analyst at Forrester Research Inc., says he's not surprised by the doctors' use of QlikView. BI tools are reaching into every market segment, Evelson says, because they not only help improve productivity and efficiency, but also help organizations to remain competitive.

"Business intelligence is definitely exploding in every market segment," he says, "because intelligence is the main competitive differentiator these days." ■

**Pratt** *is a* Computerworld *contributing writer in Waltham, Mass. Contact her at marykpratt@verizon.net.*

## Good Data Remains Key to Success

Even before deploying QlikView to analyze data, Dr. Daniel Stålhammar knew what patient information he needed to make critical decisions about treatments.

The problem, however, was getting that information together in one place quickly, because the data resided in various databases as well as on medical instruments, Stålhammar says.

This might seem like a difficult problem, but in reality, the fact that Stålhammar already knew what information he needed was critical not only to his patients, but also to the success of his deployment of business intelligence software.

Forrester Research analyst Boris Evelson says a successful BI initiative starts with building the right data model. "If I have all that right, whatever BI vendor I use becomes a much lower priority," he says.

In fact, in his 2007 report "It's Time to Reinvent Your BI Strategy," Evelson put "Proceed with data governance and data stewardship" at No. 2 on his list of 10 best practices for kicking off a BI effort, just after picking a senior business executive sponsor.

Evelson also wrote, "Most reporting initiatives fail because end users cannot agree on common definitions."

– MARY K. PRATT

*Your potential. Our passion.*

Microsoft

# MICROSOFT SYSTEM CENTER. **DESIGNED FOR BIG.**

Microsoft® System Center is a family of IT management solutions (including Operations Manager and Systems Management Server) designed to help you manage your mission-critical enterprise systems and applications.

Carnival Cruise Lines manages 1,000 shipboard and land-based servers with System Center. That's big. See Carnival Cruise Lines and other case studies at DesignedForBig.com

Microsoft®
System Center

# The New Face Of R&D

## IBM, HP and Microsoft all talk about 'open innovation.' Is it a feel-good catchphrase or the R&D strategy of the future? By Gary Anthes

IS R&D going down the tubes in the U.S.?

Pundits have taken to bemoaning a retreat by U.S. industry from basic research. And indeed, it's easy to find research labs whose glory days have come and gone — Bell Labs comes to mind. But consider this: IBM, Microsoft Corp. and Hewlett-Packard Co. collectively spend $17 billion annually on research and development.

That's right: $17 billion.

While much of that is for product development, hundreds of millions flow into areas like computational biology and nanotechnology, which may take years to bear fruit, if they ever do.

It's significant that all three companies have recently seen major changes like these in their research labs:

- In July 2007, IBM named a new research director and announced plans to invest more than $100 million in each of four long-term research projects.
- A month later, HP brought in a new research director and launched a strategy based on five mega-areas of IT research.
- And this year, Microsoft announced that it would greatly expand its research campus in Beijing and open a new lab in Cambridge, Mass.

Although their research agendas are strikingly different, the three have one important thing in common: They're all increasingly reaching out to collaborate with universities, customers and other companies. With that comes a new openness that can enrich and speed the flow of ideas into the marketplace.

"R&D is basically seeking out new knowledge, and the question is, Where are the good ideas?" says Henry Chesbrough, executive director of the Center for Open Innovation at the University of California, Berkeley. "After World War II, the good ideas were loaded up in a small number of large companies." Universities generally disdained working with industry, instead relying on the government, which was eager to fund research that might help win the Cold War.

But once the Cold War was won, much of the federal largesse dried up. "Product markets got more competitive, and those big companies couldn't sustain the long-term investments in research that they could in the earlier period," says Chesbrough.

Prith Banerjee, the new director of HP Labs

Mark Dean, a vice president at IBM Research

Richard Rashid, director of Microsoft Research

Into the breach stepped smaller technology companies, universities, companies in Europe and Asia, and even customers. "So today, no one has locked up the really good ideas," Chesbrough notes.

He says HP, IBM and Microsoft are all demonstrating a move toward "open innovation," which means that good ideas come from both outside and inside and that companies take the fruits of those ideas to market via both internal and external paths.

### HP LABS: FIVE BIG BETS

In March, less than a year after it hired Prith Banerjee as director of HP Labs, HP announced that it would shift its focus from a large number of smaller research projects to a few "big bet" projects in five areas: information explosion, dynamic cloud services, content transformation, intelligent infrastructure and sustainability. "These are the big research challenges that we think are most important to our customers in the next decade," says Banerjee, formerly the engineering dean at the University of Illinois at Chicago.

Explains Banerjee, "We had taken the approach of letting 1,000 flowers bloom and hoping a few would pan out. We'd have two or three people on a project, but now we'll have 20 to 30 large projects, each with 10 to 20 researchers working in teams." HP Labs has a total of 600 researchers in seven labs around the world.

Some observers have suggested that the new strategy was yet another retreat from long-term basic research. But Banerjee insists otherwise. In the past, he says, less than 10% of HP Labs'

budget went to exploratory, or "blue sky," research. Under the new plan, spending will be split evenly among such research, applied research and advanced product development.

A major thrust is more collaboration with other companies, universities and venture capitalists. The HP IdeaLab Web site gives would-be partners sneak previews of prototypes. In May, HP asked universities for ideas on collaboration in its five research areas.

Of course, this strategy is backed by bottom-line business sense. It not only allows HP to cull ideas from a wider pool; it also lets it mitigate risk and share research costs.

Still, Chesbrough finds it interesting that HP "would bring in not a career engineer or scientist from the company, but an academic. Instead of the go-it-alone attitude, I see this as evidence of a much more collaborative, distributed process."

## IBM: 'COLLABORATORIES'

IBM has given up the insular approach to research that marked its earlier years, Chesbrough says. While the company remains strong in basic research in materials, semiconductors and the like, it has turned its efforts more toward services and support technologies, he says.

Shortly after John Kelly ascended to the top of IBM Research, he announced that IBM would spend more than $100 million over three years on each of four "high risk" basic research areas: nanotechnology, cloud computing and Internet-scale data centers, a new integrated systems and chip architecture, and managing business integrity through advanced math and computer science. Another 15 research topics would be funded at $30 million to $50 million each, and many more at lesser levels, he said. And IBM would increase collaboration.

Part of the new game plan is "collaboratories," mostly small, regional joint ventures with universities, foreign governments or commercial partners that tap into local skills, funding and sales channels to quickly get new technology into the marketplace. For example, in February, IBM said it would form a nanotechnology collaboratory with Saudi Arabia to develop and market water desalination, solar energy and petrochemical applications.

Mark Dean, a vice president at IBM Research, says IBM is adding some big exploratory projects. "For example," he says, "how does DNA interact with carbon nanotubes for self-assembly of circuits?"

Dean says IBM is increasingly collaborating with customers. For instance, it is working with "a prominent candy company" to apply a prototype Web analysis tool to find hidden patterns and meanings in structured and unstructured information. The tool, he explains, "will look at trends and biases within a culture to predict whether a particular brand of chocolate will be bought."

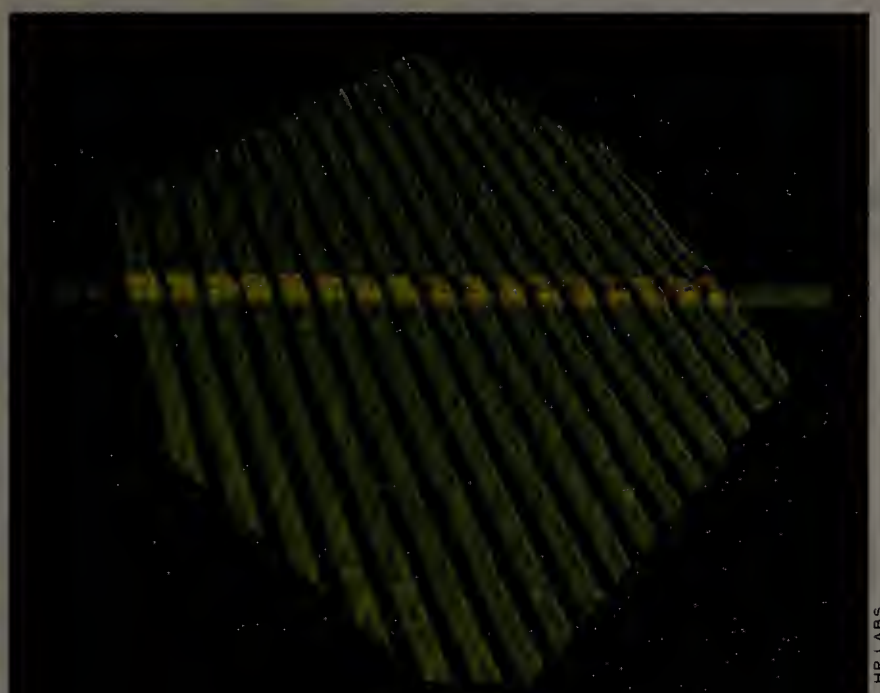
## MSR: ACADEMIC MODEL

Microsoft Research Director Richard Rashid makes no secret of his operating model: "The work we do is not that different from what you'd find at Stanford or Berkeley or Carnegie Mellon, in the sense that it is publishable basic research that is peer-reviewed. Our research may have a short-term impact on the product groups," he says, "but that's not why we do the work; it's a consequence of the work."

Because Rashid's philosophy is to first do good computer science and then see where it might fit, he focuses first on people. An example is the new Cambridge lab. "You don't establish a lab without the right person to do it," he says. "We had a great researcher, Jennifer Chayes, and she was really excited about a lab in that area. If it wasn't for her energy and initiative, it probably wouldn't have happened."

To be sure, many of the 272 research projects named on the MSR Web site are designed with major product lines like Windows or Xbox in mind. But many seem to have no likely application in anything the company sells today.

"We are growing outward into areas where computer science intersects with other disciplines, like AIDS research, computational biology and the environment," says Rashid. "We are increasingly engaged where computer science is making a big difference in the way other sciences are done." ■



J.J. YANG, HP LABS

An atomic force microscope shows 17 memristors (at the yellow squares), each 50nm, or about 150 atoms, wide.

## Memristors, Anyone?

When asked for evidence that Hewlett-Packard has not abandoned "blue sky" research, HP Labs Director Prith Banerjee cites HP's recent experiments proving the existence of the memristor (short for memory resistor), a tiny electronic circuit element that can signal and remember information by changing its resistance.

No one knows where this might lead, but HP says the memristor may be used in very energy-efficient circuits and in nonvolatile memories that retain data after the system is turned off, which would enable computers to boot up instantly.

Stanley Williams, who was part of the team that proved the memristor's existence, said at the time of the breakthrough, "To find something new and yet so fundamental in the mature field of electrical engineering is a big surprise, and one that has significant implications for the future of computer science."

– GARY ANTHES

# If I Were in Charge Of the World

## Exposure to state government revealed **things to admire,** but there is much that could be done to **make it better.**

**Trouble Ticket**

**AT ISSUE:** The public sector is starving information security.

**ACTION PLAN:** Change needs to come from the top.

LEAVING STATE government has been bittersweet. There were frustrations aplenty, but I was always impressed by the dedication of many of the rank-and-file employees. I feel privileged to have met and made friends with so many of them.

I certainly learned a lot about state government: the classification of employees, the rules and regulations related to employment, the budgeting process, and the endless politics. Politics was always my nemesis in my time in government, but in the end, it was the feeling that I was powerless to effect necessary change that drove me out.

I never would have lasted as long as I did if not for my boss, who empowered me to do my job as I saw fit. Micromanagers exist in the private sector, but they seem more numerous in government. After nearly four years in government, I feel somewhat qualified to make recommendations for improvement. Topping my wish list is that all government workers should have a boss like mine. Unfortunately, the highly structured personnel system leaves little room for things like empowerment and autonomy.

But in a rigid bureaucracy, real change has to come from the top. The CIO or CISO must have a vision and the stamina to fight for money. We're talking about protecting taxpayers' personal data. Even the most tightfisted legislators can be made to see that these investments are worthwhile, but you have to wear them down. That takes a leader who's a politician with a backbone.

My state hasn't been lucky in this area. It has gone through three CISOs in four years. In a perfect world (the one that I'd design), a state's top security officer would report to the governor and have a separate budget. The legislature would listen to him and not stand in the way of making security a top priority for every state agency.

**■ Politics was always my nemesis.**

Statutes that are now followed to the letter would undergo commonsensical revision. For example, there's a requirement that an infosec officer be appointed for each state agency. Currently, just about anybody can be named to the post — even if the person has never used a computer.

In my world, money would be available for training, and initiative would be rewarded.

### BOTH SIDES NOW

In many ways, I would like government to work more like the private sector. But from experience, I know it can't be a duplicate. Politicians and taxpayers aren't the same as executives and shareholders.

And the truth is that the private sector would be even better if it could inspire the sort of dedication and commitment I have seen in government workers. We all want to hire people who will be creative problem-solvers. The government has them in spades. I have seen them do the impossible time and again with limited funds and resources. And they keep at it despite being paid considerably less than they would receive elsewhere. Something other than money and prestige is motivating these troupers.

At one point, I threw my hat in the ring for the top infosec job, and I almost snagged it. But my boss warned me, "You really don't want to get involved in politics at that level." Silly me. He was absolutely right. I was only thinking about security, not the likelihood that I would be consigning myself to even more frustration than I was already feeling. I probably would have ended up the fourth CISO to get kicked to the curb for all the wrong reasons.

But there is something compelling about having the opportunity to draft the information security vision for our state and then negotiating all the politics to bring the legislature and governor on board.

**JOIN IN**
To join in the discussions about security, go to **computerworld.com/blogs/security**

Now I have made my choice and moved back to the private sector. But I harbor hope that I can still effect change, from the outside. Wish me luck. ■

*This week's journal is written by a real security manager,* ***"C.J. Kelly,"*** *whose name and employer have been disguised for obvious reasons. Contact her at mscjkelly@yahoo.com.*

■ OPINION

Bart Perkins

# Make a Statement

MISSION STATEMENTS help define an organization's direction and inspire employees to achieve corporate goals. Unfortunately, countless mission statements are meaningless, forgettable and totally ineffective. Many are merely an uninspiring collection of buzzwords that could have been written by Dilbert's boss. If that describes yours, you have work to do!

Good mission statements require a deep understanding of the organization and significant amounts of effort, but they can last for years. An organization that publishes a new mission every year is undoubtedly in chaos.

Creating an effective mission statement requires that you get five things right:

**Input.** Before creating a mission statement, solicit input from a broad spectrum of the organization. Survey people at all levels, across multiple business units and from all parts of the world where you do business. Important customers and strategic suppliers can also provide different and valuable perspectives.

**Team.** Creating a mission statement with a large team is usually an exercise in frustration. Most team members will have slightly different ideas about what is important. Large teams inevitably attempt to honor multiple viewpoints and consume large amounts of time wordsmithing rather than adding value. The resulting mission statements are often long, overly generalized and ineffective. Though it's necessary to solicit ideas from a wide audience, it's ultimately up to the leader and a few key staffers to design a mission statement that accurately defines the organization's future direction.

**Message.** Mission statements are grounded in reality while simultaneously motivating staffers. A good mission statement guides an organization by providing a point to steer toward and powerful inspiration. In the third century B.C., Chinese general Xiang Yu was facing defeat in a rebellion against Emperor Qin. He created the ultimate mission statement by burning his ships at the Zhang River and destroying his troops' cooking pots. The army had to win to survive.

**■ In the third century B.C., Chinese general Xiang Yu created the ultimate mission statement by burning his ships and destroying his troops' cooking pots.**

**Process.** A good mission statement can't be created in a single meeting. It's the result of a multistage creative process that involves brainstorming, discussing, refining and redesigning. Resist the impulse to publish the first version of a new mission statement. Test a draft version with a wide audience, then get feedback and buy-in from a variety of employees, departments, geographical locations and key customers. Reiterate the creative process as necessary.

**Exposure.** Communicate the mission statement broadly and repeatedly. People often need to hear a message multiple times to understand its ramifications for their departments. One Fortune 500 company had been wildly successful in the U.S., but it determined that future growth would primarily come from Asia. The CIO and her staff developed and communicated a new IT mission statement around "global IT." After months of consistently communicating the opportunities and requirements ahead, the CIO was distressed when the head of network operations asked the obvious: whether his department needed to be designing a worldwide network.

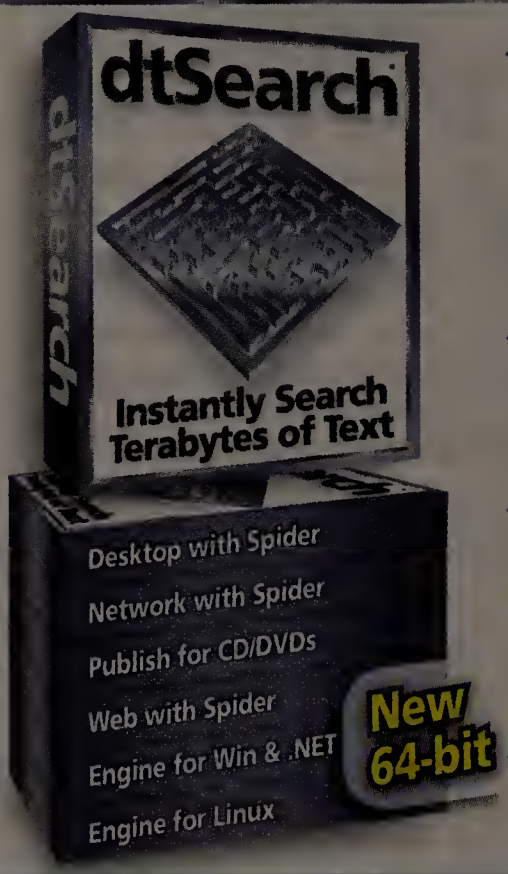
An easy way to evaluate the effectiveness of your organization's mission statement is to notice how your employees use it. If they quote it, refer to it when making business trade-offs or regard it as a corporate touchstone, it's a winner. If it becomes an integral part of your organization's decision-making process, it's golden. But if it's filed away in desk drawers and forgotten, it's useless. Pull it out, dust it off, and try again.

Don't take shortcuts when creating a vision designed to inspire your employees and entice customers. Take the time and effort to develop a compelling mission statement that will power the transformation every organization needs. ■

**Bart Perkins** *is managing partner at Louisville, Ky.-based Leverage partners Inc., which helps organizations invest well in IT. Contact him at BartPerkins@LeveragePartners.com.*

# MARKETPLACE


## Instantly Search Terabytes of Text




- dozens of indexed, unindexed, fielded data and full-text search options (including Unicode support for hundreds of international languages)
- file parsers / converters for hit-highlighted display of all popular file types
- Spider supports static and dynamic web data; highlights hits while displaying links, formatting and images intact
- API supports .NET, C++, Java, databases, etc. New .NET Spider API

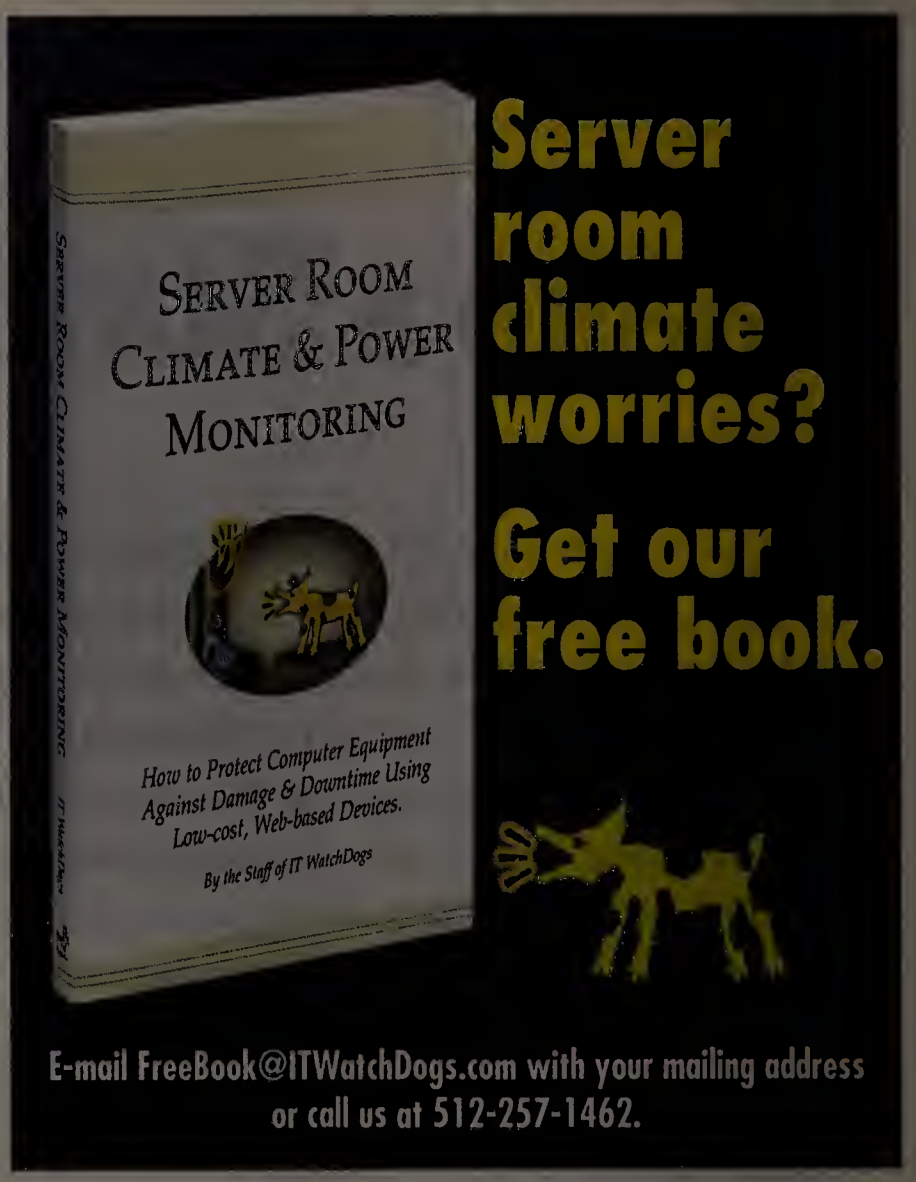
### The Smart Choice for Text Retrieval® since 1991

- "Bottom line: dtSearch manages a terabyte of text in a single index and returns results in less than a second" – *InfoWorld*
- "For combing through large amounts of data," dtSearch "leads the market" – *Network Computing*
- dtSearch "covers all data sources ... powerful Web-based engines" – *eWEEK*
- dtSearch "searches at blazing speeds" – *Computer Reseller News Test Center*

See www.dtsearch.com for hundreds more reviews, and hundreds of developer case studies

**Contact dtSearch for fully-functional evaluations**

**1-800-IT-FINDS • www.dtsearch.com**



Your message works in the Marketplace section!

*To advertise, call* **212-655-5220** *or email* **temerson@ven.com**

# Career Watch

## Unhappy Execs

**While 61% of high-level executives are satisfied with their current jobs, there's less satisfaction among IT professionals.** According to recruiter ExecuNet Inc.'s June survey of 1,597 high-level executives (average annual salary: over $206,000), those with the title of chief financial officer or comptroller are the most likely to be satisfied, and those in IT are the least likely, at just 53%.

**The reasons most often cited for being unhappy at work:**

| | |
|---|---|
| Limited advancement opportunities | 12.8% |
| Lack of challenge/ personal growth | 12.3% |
| Compensation | 11.7% |
| Stress level | 7.7% |
| Job security | 7.7% |

**24%** **Percentage of U.S. workers who say they check their work e-mail or voice mail while on vacation. That's up from 16% in an earlier iteration of the same survey, in 2005.**

SOURCE: EXPEDIA.COM-SPONSORED HARRIS INTERACTIVE ONLINE SURVEY OF 1,617 EMPLOYED ADULTS, MARCH 2008

## Next, Please

HR managers offer the wackiest interview blunders they've seen.

**Would you hire someone who told you during the interview that he was fired for beating up his boss?**

Probably not, and the human resources professional who told this story agreed: This is not a good candidate. In the 2008 version of its annual survey of HR pros and hiring managers on interview do's and don'ts, CareerBuilder.com also presented these true stories – all surefire ways to not get hired:

- Take a call on your cell phone and then ask the interviewer to leave her own office because it's a private conversation.
- Tell the interviewer you won't be able to stay with the job long because you might get an inheritance if your uncle dies, and he's "not looking good."
- Turn down an offer of food because you don't want to line your stomach with grease before going out drinking.
- Flush the toilet during a telephone interview.

**The most common detrimental mistakes candidates can make during job interviews:**

| | |
|---|---|
| Dress inappropriately | 51% |
| Speak negatively about a current or former employer | 49% |
| Appear disinterested | 48% |
| Seem arrogant | 44% |
| Fail to provide specific answers | 30% |
| Fail to ask good questions | 29% |

SOURCE: CAREERBUILDER.COM ONLINE SURVEY OF OVER 3,000 HIRING MANAGERS AND HR PROFESSIONALS, 2008

PAGE COMPILED BY JAMIE ECKLE.

**Thanks to a program at Walter Reed Army Medical Center in Washington, dozens of veterans are being trained to become Microsoft Certified Desktop Support Technicians.**

The project was initiated in April 2005, when U.S. Army officials discovered that soldiers were getting discharged with very few job skills, says Carl Stephenson, a contractor from Axiom Resource Management Inc. who was assigned to Walter Reed as the IT training program coordinator/instructor and designer. So Walter Reed partnered with Microsoft on a training initiative, and pilot classes began in October 2006.

Early on, Stephenson realized that Microsoft's training materials were written for people with one to three years of previous computer experience, whereas most of the injured veterans in the program knew only how to surf the Web and send e-mail. To bridge the gap, Stephenson redesigned the hands-on lab guide, adding more screenshots and steps for each lab. He also changed the layout of the guide so students could more easily follow the flow of each exercise.

The program was a success, with several servicemen and servicewomen passing their first exams for the MCDST certification. But another problem soon became apparent: Many of those participants were unable to complete advanced levels because they had been discharged from the hospital and had moved out of the area.

In response, Stephenson created a distance-learning program, using WebEx Communications Inc.'s virtual classroom software and other collaboration tools. "We had classes with three students who were on convalescent leave, and it was incredibly successful," says Stephenson.

He says Walter Reed expects to have 100 students in the program by this fall. And Stephenson is now involved in a pilot program with the Veterans Administration to allow participation by students who were discharged before the program began.

"It means so much to be able to help so many soldiers . . . and not allow them to fall through the cracks," says Stephenson.

Sterling Commerce (America), Inc. Is seeking qualified professionals to fill Senior Software Support Engineer positions in Irving, Texas. Troubleshoot and resolve or recommend solutions to complex software problems. Develop, analyze, modify, and test program logic for software applications and products. Gather and evaluate software requirements from customers and develop functional specifications for program modifications and enhancements. Code, test, debug, and enhance existing software. Provide technical leadership and improve team effectiveness through training and mentoring junior team members in technical and procedural methodology. Requires a Bachelor's degree in Computer Science, Management Information Science, Engineering or a related field and 4 years of experience in a programming, operations, technical support or similar position with commercial software products. Must also have experience programming in one or more of the following languages: Java, Jython, Perl. Must be able to read dumps and traces for the following operating systems or subsystems: Windows, Linux, or UNIX. Send resumes to Sterling Commerce (America), Inc., 900 Chelmsford Street, Attn.: Requisition #1171V, Lowell, MA 01851. EOE.

Software engineer to design, develop and test computer programs for business applications; analyze software requirements to determine feasibility of design; direct software system testing procedures. Requirements: Associate's Degree or educational, functional, or foreign equivalent in Engineering, Computer Science, Management Information Systems, or related field. Working Conditions: 8:00 A.M. to 5:00 P.M., 40 hours/week, involves extensive travel and frequent relocation. Apply: Computer Enterprises, Inc., 1910 Cochran Rd, Manor Oak II, Suite 230, Pittsburgh, PA 15220, Attn: Johanna Dausch, Job No 072208.

Software engineer to design, develop and test computer programs for business applications; analyze software requirements to determine design feasibility; direct software system testing procedures. Requirements: Bachelor's Degree, educational or functional (3 yrs. experience=1 yr. college) equivalent, or foreign equivalent degree with combination of educational and/or functional equivalence in Engineering, Comp. Sc., , MIS, Commerce or related field and 2 years experience as software engineer or computer programmer. 8 AM to 5 PM, 40 hrs/week, involves extensive travel, frequent relocation. Apply: Elite Careers, LLC, 1910 Cochran Rd., Manor Oak 2, Ste 205, Pittsburgh, PA 15220, Attn Johanna Dausch, Job No. 061808.

Scientific Development & Visualization Lab Mgr. needed to research & dvlp image processing s/ware & h/ware in the medical, microscope & general image processing fields incl bone erosion analysis in micro-CT mice data using image segmentation & registration, non-rigid registration of kVCT & MVCT images, de-convolution of microscope images, OCR on geographical maps, etc. Mail resume to: MN Supercomputing Inst., Attn: A. Nordling, 499 Walter Library, 117 Pleasant St., Mpls, MN 55455.

Technical Recruiter & Java Project Manager needed at unanticipated client sites. Mail resume to: Collabera, Attn: Hireme, 25 Airport Rd, Morristown, NJ 07960.

Software Engineer to develop, support & enhance software for web & general computer applications, utilizing ASP.Net, VB.Net, Web Services & N-Unit testing. Multiple openings. Requires Bach degree in Comp Sci, Eng, Math or closely related field or educ equiv & 2 yrs exp as .Net developer including 1 yr exp with Web Services. Resume to: R. Heinlein, Ferguson Consulting, 1350 Timberlake Manor Pkwy, Suite 450, St. Louis, MO 63017. EOE

Silicon Soft Solutions seeks software engineers, system analysts, DBA to customize application using various skills (VB, Java, Oracle, C/C++/C#, etc) per project requirements. Must have MS or BS with experience. Travel required. Please contact info@siliconsofts.com. EOE.

System/Programmer analysts, IT engineers needed by E IT professionals to design applications to meet client's requirements using Java, Oracle, VB, WebTech, Unix, SQL, SAP, JSP, J2EE, etc. MS/BS with exp, travel required. Contact pete@itprofs.net. EOE. No calls.

S4 Consultants (Woodlands, TX) seeks software/hardware engineers, system analysts, DBAs to customize application using tools such as Oracle, Java, C/C++, VB, SAP. Min MS or BS with 1-5yr IT exp. Jobsite various. Send resumes to jobs@s4consultants.com. EOE.

VisioniT (Detroit, MI) seeks Sr. Technical Consultant/IT Manager to maintain & enhance PeopleSoft Payroll/HR systems using PS-Code, PeopleSoft, Oracle. Minimum MS or BS required with 5-yr IT exp. Email resumes to resumes@visioniT-inc.com. EOE

TECHNICAL RECRUITER (2 Positions) w/Bach or foreign equiv in Bus Admin or Engg & 1 yr exp to recruit IT consultants w/an online-tracking systm. Placement of applicants on a proactive & reactive model. Recruit for Capital Mkts, specially fixed income, securities lending & credit derivatives, private wealth mgmt. Use MS Exchange, HTML, Outlook Express & Win to recruit consultants. Use Ace for detailed analysis of tech'l skills. Exp prior to completion of Bach deg. acceptable. Mail res to: iNINE Technologies LLC, 3 Independence Way, Ste #117, Princeton, NJ 08540. Job Loc: Princeton, NJ

South Windsor, CT (Mult. pos. avail.): Peoplesoft Applications Analyst, Programmer Analyst, Software Engineer (4 pos.). Reply to: Credent Technologies, LLC, 30 Brookfield Street, Suite A, South Windsor, CT 06074

**Looking for something new?**

You've come to the right place!

Check back with us weekly for fresh listings placed by top companies looking for skilled professionals like you!

IT|careers

Co-Branded
EMAIL
BLASTS

Reach your target audience of professional IT job seekers with Computerworld's Co-Branded Email Blasts. This unique program allows you to choose your criteria of 100% opt-in subscribers by geography, company size, job title and industry.

Call Laura Wilkinson at 800-762-2977 for details!

COMPUTERWORLD

# SharkTank

## TRUE TALES OF IT LIFE AS TOLD TO SHARKY

### First Thing First

Manufacturing engineers at this plant are incredibly talented, says an IT pilot fish working there. Trouble is, they think they're good at *everything*. So when a computer-controlled assembly line goes down at 3 a.m. with a network error, engineers begin replacing cables, then uninstalling and reinstalling software. By noon, it's still not working, and they call in an old IT guy. "My co-worker listened quietly, then thoughtfully asked, 'Did anyone bother to reboot before trying to run new cables or install software?' " says fish. "The engineers' faces dropped as they realized that during all of the uninstalls and reinstalls, they had *never* rebooted the PC running the system. One of the engineers said quietly, 'No. That can't be it.' The PC was rebooted, and within three minutes, the line was up and running. My co-worker then simply turned and walked off, while the engineers began arguing among themselves."

### Um, Thanks

This pilot fish is an account manager at an IT service provider, and he's pitching virtual hosting services to a customer with the help of a newly hired technical consultant. Can you give us more details about your virtual hosting service? customer asks. Fish turns to the consultant, who seems oddly nervous. "Well," consultant replies, "when . . . uh . . . when . . . we host . . . we . . . customers bring their servers . . . then they're placed in a rack in our collocation center and then . . . we . . . uh . . . we host them." Incredulous customer asks, "And virtual hosting?" "Virtual hosting is the same as regular hosting, with the only exception being that the customer doesn't need to bring in any equipment," consultant says confidently. Reports fish, "Needless to say, I went back to that customer a week later – with a more skilled technical consultant."

### Experience

Applications architect pilot fish is working with a young business analyst tasked with laying out a report that needs to be mainframe-compatible. What format should it be in? analyst asks fish. "Use fixed-length lines, with the fields in fixed-width columns using a fixed-width font like Courier," fish tells her. A little later, fish sees her crafting the report layout using a graphical editing package. "The headers are in 14-point Courier," fish says. "The subheaders are 12 point. The report detail is 10 point. Each field is entered as a separate text string, its position specified by an X/Y pixel offset. I suddenly realize that she has never seen a line printer or used a green-screen terminal. Her whole experience has been in a proportional-font GUI world. I feel so old."

■ *Send Sharky a tale of your true IT experiences at sharky@computerworld.com. You'll snag a snazzy Shark shirt if I use it.*


COMPUTERWORLD.COM

**DO YOU LOVE SHARK TANK?** Then you might like Shark Bait, too. Dive in and dish the dirt with like-minded IT pros: **sharkbait.computerworld.com.**

**CHECK OUT** Sharky's blog, browse the Sharkives and sign up for Shark Tank home delivery at **computerworld.com/sharky.**


## ■ COMPANIES IN THIS ISSUE

**Page number refers to page on which story begins. Company names can also be searched at computerworld.com**


Apple Inc. ..... 12
Application Security Inc. ..... 6
Asustek Computer Inc. ..... 12
Attivio Inc. ..... 16
Awareness Inc. ..... 25
Axiom Resource Management Inc. ..... 37
Bank of America Corp. ..... 8
Barnes & Noble ..... 40
Best Buy Co. ..... 25, 27
BJ's Wholesale Club ..... 40
Boston Market Corp. ..... 40
CareerBuilder LLC ..... 37
Carnegie Mellon University ..... 33
Center for Open Innovation ..... 32
CERT Coordination Center ..... 6
Cisco Systems Inc. ..... 8, 22
Commission on Presidential Debates ..... 10
Correlagen Diagnostics Inc. ..... 12
Countrywide Financial Corp. ..... 8
Dave & Buster's Holdings Inc. ..... 6
Dell Inc. ..... 22
Deloitte Consulting LLP ..... 25, 26
Delta Air Lines Inc. ..... 10, 16
ExecuNet Inc. ..... 37
Expedia Inc. ..... 37
Exxon Mobil Corp. ..... 8
Facebook Inc. ..... 8, 10, 25, 27
Farpoint Group ..... 12
FBI ..... 8
Forrester Research Inc. ..... 8, 25, 30
Free Software Foundation ..... 4
Gartner Inc. ..... 12, 15
Genzyme Corp. ..... 12
GNU Project ..... 4
Grant Thornton LLP ..... 14
Harris Interactive Inc. ..... 37
Hewlett-Packard Co. ..... 22, 32, 33
Holtz Communication + Technology ..... 8
IBM ..... 25, 32
Intel Corp. ..... 6, 12
Jiangsu Lemote Technology ..... 4
Jive Software ..... 25
Leverage Partners Inc. ..... 35
LinkedIn Corp. ..... 25, 27
Los Angeles Community College District ..... 18
Lumension Security Inc. ..... 8
McAfee Inc. ..... 23
Metro Health Corp. ..... 15
Microsoft Corp. ..... 4, 6, 10, 16, 22, 23, 25, 32, 37
MIT ..... 4
MySpace Inc. ..... 10, 25
National Australia Bank Ltd. ..... 10
Nokia Corp. ..... 10
NYSE Euronext Inc. ..... 15
OfficeMax Inc. ..... 6, 40
One Laptop Per Child Association Inc. ..... 4
Oracle Corp. ..... 8, 10, 16
Polycom Inc. ..... 16
QlikTech International AB ..... 28
Republican National Committee ..... 10
Sahlgrenska University Hospital ..... 28
Scribd Inc. ..... 10
Sophos PLC ..... 6
Southern Co. ..... 14
Stanford University ..... 33
Symantec Corp. ..... 23
Telecom Regulatory Authority of India ..... 10
The Procter & Gamble Co. ..... 12
The Sports Authority Inc. ..... 40
The TJX Companies Inc. ..... 6, 40
Twitter Inc. ..... 8, 10
U.S. Army ..... 37
U.S. Census Bureau ..... 6
U.S. Department of Justice ..... 6
U.S. Department of Veterans Affairs ..... 37
University of California, Berkeley ..... 32, 33
University of Gothenburg ..... 28
University of Illinois at Chicago ..... 32
University of Maryland ..... 16
Virgin Entertainment Group Inc. ..... 14
Wal-Mart Stores Inc. ..... 10
Walter Reed Army Medical Center ..... 37
WebEx Communications Inc. ..... 37
YouTube Inc. ..... 10
Zmanda Inc. ..... 16



dtSearch ..... 36
www.dtsearch.com
Hewlett-Packard Blades ..... C4
hp.com/go/BeReady36
Hewlett-Packard Enterprise MFP ..... 13
hp.com/go/6040
IBM Express Seller ..... 7
ibm.com/systems/uptime
IBM IT Campaign ..... 20-21 *
ibm.com/takebackcontrol/evolve
IBM Mid-Market ..... 20-21 *
ibm.com/ibmaccess
Intel ..... 3
intel.com/iTopia
InterSystems ..... 19
InterSystems.com/Connect14A
IT WatchDogs ..... 36
www.ITWatchDogs.com
Kodak ..... 29
kodak.com/go/heavymetal
Microsoft Forefront ..... C2-1
easyeasier.com
Microsoft System Center ..... 31
DesignedForBig.com
SAS ..... 17
www.sas.com/llamas
Sprint ..... 9
sprint.com/mobilebroadband
SunGard Availability Services ..... 11
www.availability.sungard.com
VentureDirect Worldwide ..... 36
www.venturedirect.com
Verizon Wireless ..... C3
verizonwireless.com/pushtotalk

* Regional Select

This index is provided as an additional service. The publisher does not assume any liability for errors or omissions.



Periodical postage paid at Framingham, Mass., and other mailing offices. Posted under Canadian International Publication agreement PM40063731. **CANADIAN POSTMASTER:** Please return undeliverable copy to PO Box 1632, Windsor, Ontario N9A 7C9. Computerworld (ISSN 0010-4841) is published weekly; except for a single combined issue the first two weeks of July and the last two weeks of December by Computerworld, Inc., 1 Speen Street, Box 9171, Framingham, Mass. 01701-9171.


Copyright 2008 by Computerworld Inc. All rights reserved.


Computerworld can be purchased on microfilm and microfiche through University Microfilms Inc., 300 N. Zeeb Road, Ann Arbor, Mich. 48106. Computerworld is indexed. Back issues, if available, may be purchased from the circulation department. Photocopy rights: permission to photocopy for internal or personal use is granted by Computerworld Inc. for libraries and other users registered with the Copyright Clearance Center (CCC), provided that the base fee of $3 per copy of the article, plus 50 cents per page, is paid directly to Copyright Clearance Center, 27 Congress St., Salem, Mass. 01970. Reprints (minimum 100 copies) and permission to reprint may be purchased from Erik Eberz, Computerworld Reprints, c/o The YGS Group, Greenfield Corporate Center, 1808 Colonial Village Lane, Lancaster, Pa., 17601, (800) 290-5460, Ext. 150. Fax: (717) 399-8900. Web site: www.reprintbuyer.com. E-mail: computerworld@theygsgroup.com. Requests for missing issues will be honored only if received within 60 days of issue date. Subscription rates: $5 per copy; U.S. – $99.99 per year; Canada – $130 per year; Central & So. America, $250 per year; Europe – $295 per year; all other countries – $295 per year. Subscriptions call toll-free (888) 559-7327. **POSTMASTER:** Send Form 3579 (Change of Address) to Computerworld, PO Box 3500, Northbrook, Ill. 60065-3500.

BPA WORLDWIDE ABM RED TAG

■ FRANKLY SPEAKING

Frank Hayes

# Wi-Fi Warfare

REMEMBER WARCHALKING? Circa 2002, hackers used to ride around looking for unsecured corporate Wi-Fi signals. When they found one, they'd use chalk to mark the location with special graffiti that said, in effect, "Hey, look! Free Wi-Fi here!"

That's pretty much what the crooks who stole 40 million credit card numbers did. Just without the chalk. Or the charm.

There really was something charming about warchalkers. They didn't hide their Wi-Fi hunting; they advertised it. For savvy IT people, that made security a little easier. A warchalker's mark was a clear warning that someone had smuggled in an unauthorized Wi-Fi access point. Finding and dealing with it was easy, once we knew it was there. In that respect, warchalking was practically a public service.

That's certainly not how anyone would describe the work of the identity thieves whose indictments were announced last week in Boston, San Diego and New York (see story, page 6). These were the guys allegedly behind huge data thefts at TJX, OfficeMax, Barnes & Noble and other retailers.

According to prosecutors, the thieves hacked their way into company networks, installed network-sniffing software and transferred large quantities of credit card information to their own servers. They sold some numbers and used others to manufacture phony cards of their own, which they used at ATMs to steal thousands of dollars at a time.

Understand, these are professional criminals with professional-grade tools and technical knowledge. Once they found an opening, they used custom software to capture credit card numbers and a well-organized international network of contacts to sell them.

But each theft reportedly began the same way:

**■ Sure, this ring of identity thieves has been identified. But what they did, other crooks can do.**

with the thieves driving around, looking for unsecured Wi-Fi signals.

In 2003, they found one at a BJ's Wholesale Club. In 2004, an OfficeMax. In 2005, a Marshalls department store, which gave them access to the mother lode: Marshalls' corporate parent, TJX.

Along the way, the thieves also found their way into Barnes & Noble, Sports Authority, Boston Market and other chains. The crooks' total haul is estimated conservatively to be in the tens of millions of dollars.

And none of it would have been possible without unsecured Wi-Fi access points.

That means we've got our work cut out for us.

Sure, this ring of identity thieves has been identified. But what they did, other crooks can do.

There's still unsecured Wi-Fi connected to most corporate networks. The situation is worst for companies like restaurants and retailers, which have lots of sites and not enough IT people to staff them all. But anywhere there's a network port where a user can plug in a cheap, store-bought access point, there's a potential problem.

It's time to start scouring our networks for those devices again. And the way to do it is the same way hackers and crooks would: by wandering around offices and especially remote sites, looking for unsecured, unauthorized, at-risk Wi-Fi signals.

Maybe it seems like an awfully weak reaction to a huge threat. But in practice, unsecured Wi-Fi hot spots are likely the biggest holes in our security perimeter. And now we know from experience — the experience of TJX, BJ's, OfficeMax and all the rest — just how much of a risk they represent.

After all, that's how the crooks got in.

There's unsecured Wi-Fi out there. Last time around, the warchalkers gave us warning.

This time, we'll have to handle it on our own. ■

**Frank Hayes** *is* Computerworld*'s senior news columnist. Contact him at frank_hayes@computerworld.com.*

verizonwireless

# Don't Push Your Luck With Your Push To Talk.

## MAKE THE SWITCH TO VERIZON WIRELESS.

Make your business instantly more productive by upgrading to the only Push to Talk service that comes with the Verizon Wireless Network and its reliable voice service, coast-to-coast coverage and 24/7 customer service. Verizon Wireless. The smart choice for Push to Talk.

G'zOne Boulder™

motorola adventure V750

**Let Verizon Wireless be your "go-to" guy for Push to Talk you can count on.**

**Call 1.800.VZW.4BIZ** **Click verizonwireless.com/pushtotalk** **Visit a Verizon Wireless store**

Push to Talk is available only with other VZW Push to Talk subscribers; coverage not available everywhere. Network details & coverage maps at vzw.com. © 2008 Verizon Wireless.

ALTERNATIVE THINKING ABOUT SERVER MANAGEMENT

# Virtual connections keep you ready for virtually anything.

The HP BladeSystem c-Class helps free I.T. from the cycle of server management. It's equipped with HP's exclusive Virtual Connect Architecture, which virtualizes your LAN/SAN settings, so you only wire once and can make adds or changes on the fly. This drastically improves efficiency and service levels and gives you the time to focus on the things that really move your business.

**Technology for better business outcomes.**

**HP BladeSystem c3000**
Featuring efficient
Quad-Core AMD Opteron™ processors

**HP BladeSystem c7000**
Featuring efficient
Quad-Core AMD Opteron™ processors

AMD Opteron 64

To learn more, call 1-888-277-9618 or visit hp.com/go/BeReady36

AMD, the AMD [illegible] are trademarks of Advanced Micro Devices, Inc.
© 2007 Hewlett-Packard Development Company, L.P.